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General Scientific

FURTHER WORK CONCERNING A TREATMENT OF PULMONARY TUBERCULOSIS WHICH IS BASED UPON THE EARLY OBLITERATION OF BLOOD AND LYMPH CHANNELS FORMERLY RAMIFYING THROUGH THE INFECTED AREA.

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Washington, D. C.

There is presented in this monograph a description of an experiment conducted upon monkeys during the months of March, April and May, 1914, by the writer, that pertains to a new form of treatment for pulmonary tuberculosis.

In a paper** read by me before the forty-first annual meeting of the American Public Health Association at Colorado Springs, September 9 to 13, 1913, a portion of which I quote as follows in order to acquaint those who may be interested with a brief resumè of the arguments so expressed at the time stated, and as a sequel or reason for the present work undertaken:

"If one will reason upon the peculiar fact presented after the necrosis of the variety of tissue cells concerned in an infected tubercular area during and after the formation of the nodule with its resulting nonvascularity, it would appear very difficult to conceive, owing to the absence of blood channels ramifying to the part, how any neutralizing agent or serum introduced or given intravenously reaches the infected area, except to a very limited extent.

"This statement would appear reasonable and worthy of deducement on account of the absolute absence of ramifying blood and lymph channels and the consequent means of communication to the part affected that would extend through the caseous walls and mass of tissue debris in which the bacilli are found.

"In support of this theory I quote from the Muir and Ritchie's Bacteriology, edition 1907, page 243, on the action of tuberculosis as concerns the tissues:

"'There can be no doubt that the cell necrosis and subsequent caseation depend upon the products of the bacilli, and are not due to the fact that the tubercle nodule is non-vascular. This nonvascularity itself is to be explained by the circumstance that young capillaries cannot grow into a part where tubercle bacilli are active, and that the already existing capillaries become thrombosed, owing to the action of the bacillary products on their walls, and ultimately disappear.'"

**Published in THE MEDICAL TIMES, January, 1914.

Further along, in the same paper, will be found the case histories pertaining thereto, and a description, with illustrations, of the apparatus designed and made by the author at that time in an apparently successful attempt to ionize the iodin and tuberculin through the infected area.

This was accomplished by means of large copper discs that constituted positive and negative poles placed upon the chest wall and back in the case* of pulmonary tuberculosis in order to restore, by this means, the lost circulatory function of the blood and lymph vessels because of their obliteration and being thus unable to carry or deliver any mediament or organic remedial agent entirely into or through the infected zone by this route.

In the case of lupus vulgaris illustrated and shown in the same paper, a similar method was used, save that the electrodes were placed upon the cheek and back of the neck respectively. Compresses saturated with Lugol's solution with a dilution of tuberculin being placed under the respective electrodes, next to the skin, in each of the respective cases cited, previous to the current being turned on, and ionization taking place.

With the present experiment my thought has been, and which was so expressed at the time of the publication of the first paper, to still further simplify the method of treating pulmonary tuberculosis, but so far as tubercular laryngitis and lupus vulgaris are concerned, I am satisfied that the electrode method then described to "cross fire" the iodin into and through the diseased tissue still remains the only practical organism eradicative method, owing to the easy access of the iodin ions through the comparatively thin neck walls in the former, and the open surface infection in the latter case, with, as stated before, the resulting death or attenuation of the pathogenic organisms concerned; indeed, after dissection of cadavers, with a view of direct needle injection in tubercular laryngitis, even at any point involved, shows such a procedure dangerous on account of the absence of practical or safe landmarks.

The work now undertaken in connection with the lung

*A similar case since the paper was read has been successfully treated in the same manner.

cases, and in order to simplify the previous procedure, as before stated, is to deposit or implant a slowly soluble iodin "cartridge" or "button" into or directly upon the infected surface in the apex of the lung tissue, which would then permit gravity, aided by the upright position of the body, to infiltrate or saturate the infected area, or, in other words, "self feed" the infection by direct contact, relying upon the well known affinity of iodin for cell debris in general, and, additionally, for the many varieties of pathogenic organisms so often found in the mixed tubercular infection of the lungs. Iodin appears by observation to have but little, if any, destructive effect upon the healthy, normal cells. One is led to the belief that it is by gravity that the original tuberculous infection spreads to other parts of the lung from the first nidus or seat of infection at the apex. Certainly, the organism does not move as the result of its own energy or locomotion.

It is to be hoped that this direct application to the parts infected of such a well known, tried and tested, germicidal agent as iodin or derivatives, must, of a necessity, minimize at once the amount of energy lost by the patient as a result of the disease, by the almost immediate destruction or attenuation of the organisms in greater or less numbers, found present, and with a consequent cessation of the production of endotoxins, that was, one trusts, fully brought out in the discussion of part of my first paper (see appendices A and B) upon the title quoted in the text at the inception of this article.

By the present method of treatment the lung is sterilized in a sense or rendered non-receptive, by a time limit or periodical injections, to further bacterial encroachment or future invasion. The patient's general health or ego and his inherent physiological resistance to tubercular infection would be greatly augmented or given an impetus by the usual dietary, and hygienic measures in vogue and practiced to-day, and these agents would certainly meet with less resistance in the accomplishment of this end—gains that have been heretofore lost or merged with the constantly increasing outflow of energy in connection with the disease—sometimes these measures become temporary masters with partial recovery of patient, but only to lapse again because of the absolute non-removal of the cause.

Fig. I.

Showing the "landmark of Davis and Manning" and the iodin emulsion needle in position upon a cadaver. To reach the approximate lung apex the needle is made to enter the body at the distal end of a two and a half inch line drawn from the seventh cervical vertebra at a point midway between the first and second ribs.

Fig. II.

Showing the "landmark of Davis and Manning" with flaps dissected back in order to expose the pathway of needle with safety and freedom from impingement upon important vessels or centres.

During the present experiments made upon the monkeys—which were selected on account of the upright position or gravity attitude of the body—no shock, cough or dyspnea was noticed after the implantation, and there was absolutely no collapse of the lung, though such is possible if desired. There was no rise of temperature and only the usual sequels of a recovery from the administration of a general anaesthetic were observed in the animals thus treated. There has been a gain in weight since the injections or implantations, the appetite is good and normality is the rule from observations made from time to time. No change in normal habits or actions were noticed during a period of observation of some four months.

I used in making up the material for each iodin "button" or "cartridge," previous to the injection, 1 Cc. of caustic iodin, because of the greater amount of free iodin contained in this particular solution, to which was added 15 Cc. of egg albumen to mask or modify the irritant action of the iodin, and to convert the mass into a mild organic compound with its retained antiseptic properties. This preparation I found had a tendency to harden or stiffen into a "button" after the union of the two ingredients took place, producing what might be termed an emulsion of caustic iodin and egg albumen. It should be noted that all the agents used are soluble in watery secretions.

Possibly the union of 15 or 20 Cc. of the patient's own blood serum in combination with the iodin, to which might be added a fibrin for coagulation or stiffening purposes, would be a more host acceptable implantation, but it was not tried because at the time of the experiment I sought more of an inert mass vehicle containing free iodin for contact with necrotic tissue.

If now sterile agar gelatin be added to the mass in proportion of 1 to 5 for stiffening purposes, or any so given arbitrary amount indicated, is used, the emulsion may be made to liberate the free iodin more slowly, in

a thermal control sense, that is adjusted slightly above or at the bodily temperature.

One of the monkeys failed to react during the administration of chloroform, and the autopsy showed a heart lesion. A large amount of this anaesthetic had to be given this monkey in order to render him safe to handle. In this regard it should be stated that in human beings all that will be required to have the entire needle implantation or injection method painless will be simply a superficial injection of cocain at the point described, followed by a deeper injection of the same drug through or into the previously anaesthetized zone.

Descriptive technique employed: The upper posterior aspect of each shoulder (they were shaved in case of the monkeys), is first palpated to determine if any dull spots or impaired conditions exist, and following this the stethoscope is next utilized to detect any existing rals, the object being to determine, geographically, such points mentioned in order to deflect the needle point toward such lesions after entrance is made at the "landmark of Davis and Manning" for direct contact with the iodin emulsion.

Having determined upon the procedure outlined, the operator next paints the entire upper posterior aspect of the shoulder with tincture of iodin. He then carefully determines, counting from above downward, the seventh cervical vertebra, which is more easily found by bending the head and neck forward whence the vertebral prominence mentioned is at once located. The operator then measures, in the adult, from this landmark to the right or left, depending upon the lung affected, in a straight line, for a space of about two and a half inches, and at the extreme distal point of this line that may be drawn with a flesh pencil, the needle is first made to enter in a downward, forward, outward (lateral) direction toward the shoulder joint. The operator will rather seek to pass the needle just about midway between the first and second ribs.

When the needle is made to pass in turn through the skin, fascia, various muscles and serous investing membranes, the sudden lack of resistance to the needle point will at once inform the operator that he has passed into the soft upper lung tissue. After the contents of the syringe has been discharged—none should be ejected until the terminal lung point is reached—the needle should be withdrawn *very slowly*, in order that the contractile tissues will immediately close in front of the slowly withdrawn needle point, and thus prevent any atmospheric air from entering the lung by this route from without inward. A drop of collodion now seals the very small crifice upon the shoulder aspect. The needle enters the human body for a distance of about one and one-half inches before the objective lung tissue is reached. Only the ordinary well known hypodermic precautions are necessary to exclude the entrance of air with the syringe contents, *i. e.*, holding the syringe upright with needle uppermost, and then forcing piston slowly inward until the fluid appears at point of needle, which obviates any air pockets.

The needle as utilized in these injections or implantations was one of the ordinary salt solution pattern largely alloyed with silver, and rather flexible. The central discharge mouth or tip I altered by plugging such central discharge outlet, and then filed lateral oblong slots, just above the plug, so that the iodin emulsion is delivered from both sides of the needle in two "ribbon" forms in order to cover or spread the medicament over the greater part of the cone of the lung upon cautious manipulation, yet the usual common, straight, discharge needle should answer fairly well, but not so thoroughly to my mind.

The ordinary hypodermic syringe can be doubtless utilized in these cases, but the writer used an all-metal heavy dental syringe that permits a firm grasp of the hand, in addition to a steady, heavy pressure upon the discharge piston.

Whether specific periodically repeated dilute needle injections of iodin for flushing purposes at the point described and indicated, or vaporous medicaments are utilized in lieu of the slowly soluble "button" or "cartridge" that is implanted, would prove effective or not I am unable to state, but certainly if sterile technique is carried out in each respective instance and the injections are not made too frequently that would tend to set up inflammatory conditions, it should prove a very valuable measure in the treatment of the disease.

The apparatus required at an operation is a sterile test tube containing the sterile emulsion, that may, in turn, be placed in a flask of hot water if the agar-gelatin mixture is used with the emulsion to prevent premature hardening of the mixture. An alcohol lamp or Bunsen burner, through which the needle is passed three times immediately previous to the injection, completes about all the simple equipment necessary or required.

Fig. III.

Skiagraph showing the iodin emulsion needle in position upon the body at the designated point from the described "landmark of Davis and Manning." The needle in taking this path passes in turn through the following structures: Skin, superficial fascia, deep fascia, trapezius muscle, between the levator scapulae and splenius muscles, cervicalis ascendens muscle, external intercostal muscle, posterior intercostal membrane, parietal pleura, visceral pleura, lung.

My sincere thanks are due to Prof. Carl Davis of the Chair of Anatomy of George Washington Medical School, Washington, for painstaking, faithful work, and kindly co-operation in connection with the dissection of cadavers, and for the interest shown when first I advanced to him the idea of a needle implantation at the apex of the lung, and to Prof. Frank Baker of the Chair of Anatomy, Georgetown Medical College, and superintendent of the National Zoological Park, Washington, for his kindness and interest exhibited when the idea was first broached to him of the proposed experiment, and for furnishing me with the necessary monkeys and experimental facilities. I also thank the chief keeper of the Zoological Park, Mr. W. H. Blackburn, for his material help to me in handling the infected animals; Dr. Thomas A. Groover, radiographer, of Washington, for his splendid, patient work in making the skiagraphs; Prof. Elmer Gates of Washington for much information pertaining to chemistry and the laws of physics, and lastly my assistant, Dr. D. P. Bush, for relieving me from my daily routine duties, upon many occasions, at great inconvenience, while I was absent in another part of the city conducting the experiment here recorded.

APPENDIX A.

Extract of discussion following first paper read at forty-first annual meeting American Public Health Association, Colorado Springs, September 9, 1913:

Dr. Sumner (Iowa State Health officer)—There is nothing that speaks to one so forcibly as a fact illustrated and applied. While listening very attentively to Dr. Manning's paper, I recalled an incident that came under my own observation while working in the bacteriological laboratory, in which the germ of diphtheria had been used to inoculate bouillon. The bouillon was filtered through a non-glazed Pasteur filter, and a pure specimen of the bouillon used to inoculate a guinea pig with no effect whatever. Then the bouillon which had been inoculated and the germ filtered out of the bouillon, and such a product being used the filtrate was tried upon a guinea pig, which died, thereby showing that it was the toxin of the microorganism that killed. In listening to the doctor's paper I pictured in my mind a lung cavity. Now, in the injection of

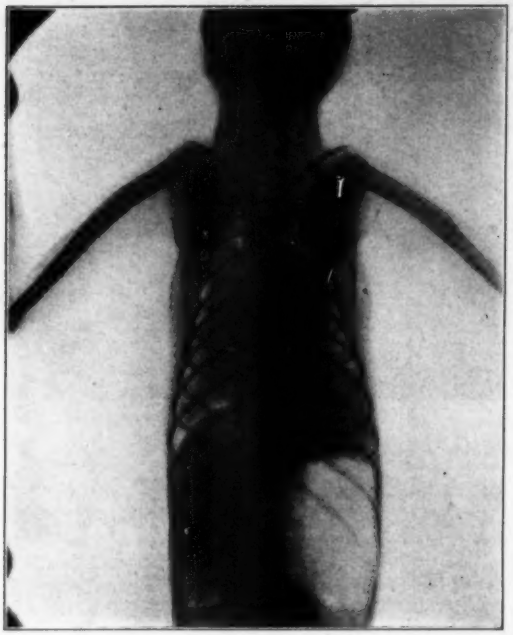

Fig. IV.

Skiagraph of one of the monkeys, showing the iodin emulsion slowly soluble, self-feeding, "cartridge" or "button" in position at point marked with a small cross upon cut.

The mass in this instance has been pigmented with a silver preparation for photographic locative purposes, but is only faintly discernable. Its function is to constantly self feed the tubercular infection, aided by gravity, and the upright position of body.

tuberculin into the system the doctor very nicely illustrated the fact that the destroyed tissue was void of blood vessels; therefore, you could only get the serum to the part which had blood vessels. By using his method of the iodin solution and the earlier product of tuberculin, as I understand it, and using this in a normal salt solution and placing it over the chest and then placing the negative pole to the front and the positive pole to the back, he produces an ecchymosis of the iodin solution and the tuberculin into the infected tissues. I am very glad to listen to this paper. It enters a new field, and it the medicament or neutralizing agent can be passed through the tissues by the use of the galvanic current, thereby destroying the micro-organism, you destroy the thing that produces the toxin; otherwise you have your endotoxin in the lung and your micro-organism continuing to make the toxin, and by and by your system becomes destroyed by the micro-organism working in the system and manufacturing the toxin; but the doctor comes here with something new and I believe that it is worthy of careful consideration. I think it would be an excellent idea for this section to appoint a committee to take up this work of his and investigate it and report the results. I do not know whether it would be practical to ask the Surgeons General of the United States Army, Navy and Public Health Service, all residents of Washington and all known to Dr. Manning, and ask them to take this matter up in such a way that it may be demonstrated whether or not this new field may be brought into practical use in the treatment of the dreaded tuberculosis.

Dr. Woodward (Health Officer, Washington, D. C.)—I am very willing to second Dr. Sumner's motion for the appointment of such a committee. Having seen the disastrous effect of the advent of Friedmann in this country, I think we might even go a step further and try, with the aid of other organizations in this country, to provide some means where ideas of this kind can be promptly either developed or exploded. Dr. Manning has been very frank with his work, somewhat contrary to Dr. Friedmann. He has recognized the possible limitations, and has appealed, I believe, to various officers for opportunities to either prove or disprove his theory. Any aid I have been giving, I think Dr. Manning will admit, has been rather in the way of destructive criticism. I did not expect him to obtain any results when he first broached the matter to me, either in his lupus or pulmonary case, but it is one thing to criticise a theory or a hypothesis from a purely theoretical standpoint and another thing to test an idea out on a patient or animals as he has done in these cases. Dr. Manning is not in active practice; he is an officer attached to the National Printing Office, and what he has shown and accomplished here is simply in the way of developing; this work has been purely a labor of love with him; he has taken his own money, time and his own resources, under adverse circumstances, and for that reason is to be greatly commended.

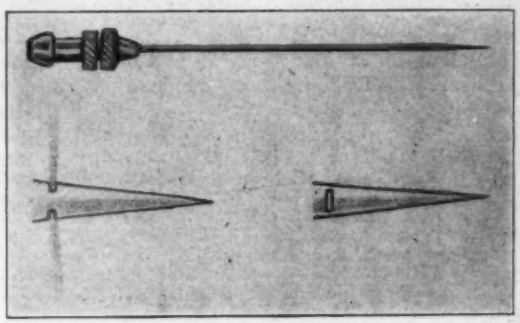

Fig. V.

Showing outline of style of salt solution needle used. The usual central discharge has been plugged, and in lieu lateral slots were filed just above the plug. The discharge of syringe content by this "double ribbon effect" is to cover more completely or distribute the iodin emulsion over and superfically into the cone of lung.

APPENDIX B.

Extract of discussion following first paper read at forty-first annual meeting American Public Health Association, Colorado Springs, September 9, 1913.

Dr. Manning (closing)—The cases of immunization favorably reported by tuberculin can possibly be explained by the fact that the tuberculin is administered before any lesions exist; therefore, the blood vessels to the infected part have not been destroyed, and I believe that tuberculin will neutralize and attenuate the organisms just as Dr. Koch first stated, but I believe that tuberculin fails to act after the lesion exists simply because the caseous, non-vascular environment prevents. When there are no nodules and the tuberculin present in the blood by an osmosis that is aided by the saline character of the blood, the tuberculin combines with the organism and thus neutralizes the bacilli. When, however, we take a mass of tissue debris in which these organisms exist and that in addition is surrounded by caseous walls in which no arteriole or blood vessel will ramify or grow, I cannot conceive of how any neutralizing agent or any serum can be carried to the part to accomplish this purpose.

In all instances of any infection the type of foreign organism or pathological cell present with its thin, porous, protein walls is acted upon by the blood in the manner described with resulting sequelæ in the form of disease solely because of the fact that it happens to inhabit the blood stream at a time when the phenomenon of osmosis continues unceasing with the normal or nutritive cells present.

The theory is advanced that it sets up a form of auto infection with resulting attenuation, or death, as concerns the organism, which in this instance is the tubercle bacillus; the same principle of osmosis inclusive of endosmois or exosmosis going on in any normal tissue cells present, aided by the saline blood; differences in the specific gravity of the blood and fluid contents of cell keeping up the constant interchange.

Possibly the hypothesis thus advanced may explain the mechanism of anaphylaxis in that the nervous-type of tissue cells controlling respiration, heart action, and other vital centres, become involved by having a toxic protein bacterial elaborations—wonderfully complex—osmosed out into the blood stream. When this amount is augmented by any artificially introduced elaboration protein obtained from the same organism from cultures grown outside of the body it may possibly result in the nervous tissue cells being simply overwhelmed and rapidly ceasing to functionate as a result of the general systemic continuous osmotic process going on; the respective blood and cell elaborations interchange terminating because of the altered specific gravity of the normal cell product and before any inherent adjustment can take place.

Acute pancreatitis, fortunately rare, usually occurs in patients who have had some history of gall-bladder trouble, and is most commonly lighted up by back flow of bile into the pancreatic duct, due to some obstruction of the ampulla of Vater.

THE COMMONER ABSCESSES OF THE THROAT—DIAGNOSIS, SYMPTOMS AND TREATMENT.

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My object in presenting this paper is to point out clearly the symptoms in diagnosing the more common abscesses of the throat, frequently overlooked by the physician, in order that they may be readily recognized and prompt and proper treatment instituted.

Peritonsillar Abscess or Quinsy is an acute inflammation of the tissues contiguous to the faucial tonsil, and may involve the tonsil itself, resulting in the formation of pus. In a large number of cases the focus of infection is in the supratonsillar fossa and somewhat external to the tonsil. The suppuration extends towards the median line and seldom involves the other side. The uvula is frequently dragged to one side and becomes oedematous.

Quinsy occurs most frequently between the ages of 15 and 35 years, being very rare in early childhood and in the aged. It is frequently brought on by exposure to cold, anxiety, overwork and anything which will lower the resisting power of the tissues, renders the individual more liable to the infection; thus chronic hypertrophy and degeneration of the tonsils indirectly predispose to attacks of quinsy.

Symptoms.—Many cases begin as a simple acute tonsilitis; the onset is gradual or it may begin with severe general symptoms, such as fever, rigors, muscular pains, headache, obstinate constipation, painful deglutition and general malaise. At first there is discomfort in the fauces, soon developing into actual pain which is aggravated by swallowing. In severe cases there may be torticollis. The temperature may be 100 to 103 degrees or even higher.

The pain is deep seated, frequently radiating towards the ear on the affected side. As the disease progresses the temperature rises and a slight swelling may be noticed in the supratonsillar fossa, the uvula becomes edematous and there is a profuse amount of thick tenacious mucus; the saliva is increased and is gotten rid of with difficulty; by this time swallowing becomes difficult and painful, the tongue heavily coated, the voice altered and muffled and the breath fetid. There seems to be a fixation of the lower jaws, which is always symptomatic. The patient has an anxious expression and looks very ill; this is the characteristic picture of quinsy. Movement of the head from side to side is painful on account of the infiltration of the tissues in the region of the tonsil.

Sleep is interfered with because of the suffocation produced by the swelling in the throat. At the onset there is a slight redness and swelling of the anterior pillar and supratonsillar tissue on one side; the tonsil may be unaffected or may also show a slight inflammation. Unless the disease is aborted we will find at the end of a few days that the redness, tenderness, pain and swelling are very much increased; the soft palate and uvula become markedly edematous and the whole pharynx becomes inflamed; swallowing is almost impossible and as the patient takes little nourishment he becomes very weak and emaciated.

If the abscess was due to a lacunar tonsilitis we will observe the crypts in the upper portion of the tonsils filled with a white cheesy debris, consisting of exfoliated epithelium and pathogenic microorganisms, chief of which are the streptococcus pyogenes and staphylococcus aureus and albus.

When a patient once suffers from quinsy he is predisposed to subsequent attacks.

Death from peritonsillar abscess is known to have occurred in one of several ways—as in sudden rupture of the abscess during sleep resulting in suffocation, or by a severe infiltration into the larynx, causing an edema of the larynx and epiglottis; or by the erosion of the walls of one of the large arteries in the neck adjacent to the tonsils, causing a fatal hemorrhage. These blood vessels, if weakened by pressure of the large abscess, may rupture by a sudden evacuation of the abscess. Death may also be caused by absorption of pus and the formation of metastatic abscesses, thrombi, etc.; such occurrences are, however, extremely rare.

W. F. Chappell reports a case in which the peritonsillar abscess was opened by a small incision in the usual situation; four days later a hemorrhage of about 6 ounces occurred and was repeated in a still larger amount in four hours. It was controlled by astringent applications, but five days later a third hemorrhage of about 8 ounces was followed by persistent oozing. The abscess cavity distended with clots was then freely opened and packed with iodoform gauze after having been irrigated with peroxide of hydrogen; under daily renewal of this dressing the cavity healed without further bleeding. The duration of the condition may be from a few days to two weeks or even longer. It may terminate by spontaneous rupture, but in the majority of cases it has to be opened.

Treatment.—It is always advisable to abort the disease, but unless seen early this is impossible. The patient should be put to bed, given a saline purge and take what little nourishment they can. I use a capsule containing 5 grains of each of phenacetin and salol every three hours for six doses, then salol 5 grains, four times daily, and bicarbonate of soda, 30 grains in vichy four times daily. The sucking of ice is very agreeable to some; spraying the nose and throat with a mild antiseptic solution as Dobell's or Seiler's helps to free them of the mucus. If seen early, i. e., within twenty-four hours of the onset, I like to apply to the inflamed parts tincture of iodin or a 10 per cent. solution of protargol. Externally use an ice bag or cold compresses to the neck, especially to the angle of the jaw. If we should fail to abort the disease by these methods it is advisable to anticipate the formation of pus and to make an incision in the most prominent part of the swelling. We usually find pus after the third or fourth day.

The best instrument is a curved bistoury, or an ordinary scalpel with a long handle will do. The blade should be protected with adhesive or absorbent cotton to within one-half an inch of the point so that no more than that amount of cutting surface should be exposed. The patient's throat is first sprayed with an alkaline solution, such as Dobell's, to clear the mouth, then a 10 per cent. solution of cocain is sprayed over the inflamed area, the tongue is held down with a tongue depressor, a vertical incision ¼ to ½ an inch long is made through the soft palate just outside of and parallel to the anterior pillar and in the neighborhood of the line of the upper margin of the tonsil. The incision should be enlarged with a dressing forceps or artery clamp and the pus if present is evacuated. The patient's mouth then is rinsed with a solution of hydro-

gen peroxide. If possible a drain is inserted in the abscess cavity and a small portion is left projecting through the wound to serve as drainage and to prevent a too rapid closing of the wound. The patient is given a gargle of a weak solution of potassium permanganate 1 to 10,000 to be used every hour and then less frequently for the next day or two. Hot applications should be applied to the neck; hot liquids taken internally and usually within a few days there is a complete recovery in a great majority of cases. Should there be no pus after the incision is made, the site of incision will be one of least resistance through which pus will eventually escape, usually within the course of a day or two.

It is well also in these cases to apply hot fomentations or a flaxseed poultice large enough to cover the whole side of the neck and covered with oil silk or gutta percha tissue and to use hot inhalations or gargles. When pus evacuates itself, or even after the incision when no pus is present, the inflammatory process will subside and the patient will be immediately relieved.

Retropharyngeal Abscess.—Retropharyngeal abscess is a phlegmonous inflammation involving in children the lymphoid tissues, and in the adult the cellular tissues of the pharyngeal wall. It is therefore advisable to consider this pharyngeal condition by dividing into abscess occurring during infancy, and abscess occurring during adult life. It is quite common in infants who suffer from rickets, tuberculosis, or inherited syphilis. In many cases no cause for the suppuration can be discovered. It is very likely to be secondary to infections of the lymphatic glands. In some few cases it is secondary to tubercular caries of the vertebrae. It is often a sequel to the exanthematous diseases, or it may follow injury from blows or foreign bodies. In very rare cases it is caused by the burrowing of pus from other regions.

These cases are usually seen by orthopoedic surgeons as a complication of Pott's disease. On examination the pharynx may be seen to be occupied by a bulging mass on either side of the median line. The mucous membrane over this mass is inflamed and tense and very often the abscess is so low down that it cannot be observed by direct inspection, so it is important to make a digital examination of the pharynx, especially in children with difficulty in breathing and pain on swallowing without any apparent cause.

Symptoms.—In infants the first symptom may be refusal to nurse, due to difficulty in swallowing, a peculiar voice of a pronounced quality, dyspnea and a cough, croupy in character. The dyspnea ultimately becomes very alarming and in fact may be the first symptom to draw attention to the throat. Fixation of the head is usually present. In older children there are the usual symptoms of a sore throat and the abscess is readily recognized by inspection; palpation of the pharynx will confirm the diagnosis. This will reveal a boggy mass pushing the soft palate forward; fluctuation may be felt and the cervical glands may be swollen. Burrowing of pus may lead to infiltration in the cervical tissues and a general septicemia may follow.

The most common danger is rupture of the abscess, the pus escaping into the lower air passages, resulting in speedy asphyxia or septic pneumonia. In adults the abscess is more apt to simulate suppuration in cellular tissues elsewhere and is attended by more disturbance and local reaction. Difficulty and pain on swallowing are the chief subjective symptoms. Pus accumulation may occur within twenty-four hours, after the initial symptoms, or it may take several days or even weeks, depending upon the primary cause of the abscess.

Differential Diagnosis.—Retropharyngeal abscesses may be mistaken for croupous laryngitis, but in the former swallowing as well as respiration is difficult; here also we have the unilateral swelling and the fixation of the head. It may also be mistaken for an aneurism of an artery in this region. The pulsation and bruit in the latter condition will confirm the diagnosis of aneurism. Acute inflammation of the pharynx may also simulate retropharyngeal abscess, but digital examination of the pharynx will determine the diagnosis.

The peculiar boggy and bulging mass occasionally fluctuating, situated on either side of the pharynx will usually determine the diagnosis of retropharyngeal abscess.

The prognosis in infants and in the acute cases of adults should be guarded, as they sometimes take a peculiarly fatal course and character of an acute septicemia. In older children and adults the prognosis under appropriate treatment is always favorable. In cases where the pharyngeal abscess results from tubercular caries of the cervical vertebrae the prognosis is not so good.

Treatment.—The main indication is the immediate evacuation of pus by an incision in the most prominent part of the swelling. It is not always necessary to wait for fluctuation as the incision will release the tension and instant relief is obtained for the patient.

Where we suspect the cause to be due to tubercular caries of the vertebrae, it is better to make an external incision along the anterior or posterior border of the sterno-cleido-mastoid muscle and extend inwardly by blunt dissection, taking care not to injure the great vessels and nerves of the neck, to the anterior wall of the verterbral column and with a pair of scissors open the abscess cavity there situated. The abscess should be widely opened by introducing a dressing or artery forceps into the incision and freely evacuated.

The necessary antiseptic precautions for an operation should here be observed. A general anesthetic is required and in ordinary cases the incision per oram is usually performed. The patient should be placed in an inclined position with the head lower than the body to prevent the pus from escaping into the larynx. It is absolutely necessary to take this precaution in children.

The mouth should be kept open with a mouth gag; the index finger of the operator is used as a tongue depressor and guide to the boggy mass; a sharp-pointed knife is introduced and guided by the index finger, an incision is made into the abscess cavity. Very young children should immediately be inverted so as to allow the pus to run out of the mouth.

The remaining pus can be removed with moist sponges or expectorated by the patient. Then introduce a pair of dressing forceps into the incision and enlarge it to obtain free drainage for the further evacuation of pus. It is advisable to introduce the finger again to the abscess cavity and gently press out any pus that may still remain.

The after treatment should consist of antiseptic mouth washes as Dobell's solution, frequently used during the first twenty-four or forty-eight hours; hot applications should be applied to the neck and submaxillary region, and hot, nourishing liquid foods are quite agreeable to these patients.

Young children should be given steam inhalations

1864 Seventh Avenue.

CATARRHAL PYELITIS: URETHRO-RECTAL FISTULA.

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Brooklyn, N. Y.

The first case which I have to show this afternoon is one of a great deal of interest from a diagnostic point of view. Before the patient is brought in I will give you the history and shall also outline the points in making the diagnosis:

The patient is a young woman 21 years of age, married two months. One year ago she had a profuse vaginal discharge, which was yellow and blood-streaked. There was burning on urination and great excoriation of the vulva, so that she could hardly walk. This gradually grew less and now it is only present before menstruation, which is painful and profuse. Her husband is healthy.

The present trouble began three months ago. It started with a chill, pain in the back and frequent, urgent and painful urination. The urine was thick, scanty, ammoniacal and scalding. These conditions continued and three days before entering the hospital she had severe pain in the left side of the back, cramp-like in character, radiating to the right side into the abdomen and groin, paroxysmal in character, severe and accompanied with vomiting.

On entering the hospital physical examination showed the abdomen anteriorly to be moderately tympanitic and posteriorly there was extreme tenderness over both kidneys. Gynecological examination by Dr. Holden showed the uterus and adnexa to be normal and no secretion could be expressed from Skene's or Bartholin's glands.

The pain continued on the left side of the back radiating along the left side of the abdomen to the vulva, very severe in character and, having excluded any difficulty in the pelvis, the medical men (to whom she came at first) referred her to the Genito-Urinary Department.

On September 23rd we did a cystoscopy and attempted to catheterize the ureters. The ureter catheter on entering the right ureter was obstructed one-half inch from the entrance and no urine could be obtained and the urine which was drawn from the left ureter was found to be cloudy, having a number of white cells, red cells, urea 12 milligrams per cubic centimeter.

Now we had the left urine containing pus and low urea, but we did not know anything about the right kidney, and we were still in doubt as to the diagnosis of the entire condition, although we had found out something in regard to the case. It was so important to get the urine from the other side, in order to know what both kidneys were doing, that I directed another cystoscopy and ureteral catherization be made. The second time she was anesthetized with ether. Cystoscopy showed that the bladder was the seat of a mild cystitis. The mouth of the right ureter was red. The entrance of the catheter was difficult, and it went in only two-fifths of an inch. The urine drawn from it contained no pus; 4 3-5 grains of urea. On the left side the entrance of the catheter into the ureter was difficult. It entered one-half inch and was arrested, but the urine drawn from the left side was loaded with blood and pus and urea was only 2¾ grains to the ounce. The indigo carmin test was used at the same time and from the right kidney we got a return of the indigo carmin in 20 minutes, while on the left side, after waiting for 37 minutes, there was no return.

We have, then, demonstrated on the right side a normal kidney with normal urine; on the left side, urine loaded with pus, delayed indigo carmin and low urea.

The bladder urine was examined and found to be acid, 1020, orange, with heavy deposit of pus and blood. Smears were made from the vaginal discharge and also from the mouths of the peri-urethral glands and Gram negative diplococci were found, but Professor Murray, who examined it, said that the organism was not the gonococcus, although it resembled it; so we could therefore exclude gonorrhea.

Inoculation of guinea pigs with the urine was not done, for reasons which I will speak of later.

A radiograph was made, but no evidences of renal or ureteral calculus were discovered.

Our examination, therefore, shows that we have a pyelitis on the left side, but we have not discovered its cause. There are various forms of pyelitis, catarrhal, calculus, gonococcal, ascending from the bladder, and tuberculous. We must differentiate which variety we have in this particular case. Pyelitis due to the presence of a calculus in the pelvis or parenchyma of the kidney, can be excluded by the absence of the shadow, in the radiograph. The form of pyelitis which sometimes accompanies a gonorrhea and is due to the ascent of the gonococci through the ureter or perhaps haematogenous infection through the blood current, is called gonococcal pyelitis. We can exclude that because the organism in this case is not the gonococcus. We have, then, two remaining varieties to consider, one of which is the ascending pyelitis from the bladder—beginning as a cystitis and affecting the kidney secondarily and the tuberculous form. We differentiate by inoculating guinea pigs or finding the characteristic organism in the urine. Some of the urine from the infected side might have been taken and injected into the peritoneal cavity of a guinea pig and then we could have waited for three weeks and made an autopsy on the guinea pig and if we found that the pig's peritoneal cavity was studded with tuberculous nodules, we would have said that it is a case of tuberculosis pyelitis. But as the woman is anxious to get home, I advised her that if she wanted to take the slight risk of an exploratory nephrotomy it would save time. She consented and we will open the kidney and ascertain the trouble. If it is tuberculous it will mean an extirpation of the kidney because we have already found that the kidney on the opposite side is healthy. If it is a mere non-tuberculous pyelitis, we will be able to bring the case to a speedy cure by a simple nephrotomy and drainage for a couple of weeks as prolonged drainage will bring about a cessation of the suppuration.

Operation.—The kidney is exposed in the usual manner and brought out on the flank. It is normal in size, the capsule unusually adherent; nothing discovered on palpation.

Clamp protected with rubbers applied to pedicle to control hemorrhage temporarily.

Incision is made along Broedel's line splitting the kidney in two halves, and showing a perfectly normal parenchyma free from stone or tuberculous nodules. The pelvis explored for calculus and none found. A sound was not passed through ureter because it was compressed by clamp in place and also because a ureter catheter had been previously passed up to pelvis of kidney, excluding stone lodged in the ureter.

* Clinical Lecture at Long Island College Hospital.

On splitting the kidney the only pathological finding is a red oedematous appearance of the mucous membrane of the pelvis of the kidney, indicating a chronic catarrhal pyelitis.

Mattrass sutures introduced through the kidney and the convex surface is closed with running suture except at the mid portion where a drainage tube is introduced into the pelvis of the kidney and held in place with a catgut suture. The clamp is removed from the pedicle and the kidney returned to its bed and all hemorrhage has ceased. The wound is drained with a gauze tampon and closed with sutures. As a result of our operation we find that we are dealing with a case of simple catarrhal pyelitis, probably caused by a migration of the organisms from the bladder.

We can confidently expect a cure of the pyelitis through the direct and prolonged drainage of the pelvis of the kidney combined with irrigation with silver nitrate solution. The pain from which she suffered so severely and for which she sought relief is somewhat difficult of explanation. To account for it we must have recourse to observed clinical phenomena. Before the use of the *x*-ray became a routine, cases were occasionally met with presenting symptoms of renal colic which upon operation showed no stone but only a thickened and adlucent kidney capsule. After splitting the kidney and relieving the intra capsular tension the pain would permanently disappear, and the explanation was that the pains were caused by a congestion of the kidney, the filling of the vessels with blood, causing the parenchyma to swell and press upon the unyielding capsule. Dividing and stripping off the capsule, relieve the pressure and the pains cease and do not return.

We must accept that explanation in this instance, and if after a fortnight I can present her to you again and free from pain, it will be a proof that our theory was the correct one and our procedure of incising and stripping the capsule warranted by the conditions found and justified by the results.*

A Case of Urethro-rectal Fistula Following Prostatectomy.

The next case is a man, 62 years of age, born in Germany, referred to me by a physician, complaining of passing urine by the bowel and inability to control his urine when standing or walking. This uncomfortable condition was caused by an operation done eleven months ago by the removal of a hypertrophied prostate. A perineal prostatectomy was done in an up State city and the wound never fully healed. He was left with a fistula from the urethra which communicated with the rectum and his perineum, and so some of the urine passes out through the urethra and some through the fistula in the perineum and some into the rectum, so that his rectum fills up and he has to pass his feces and urine together.

Various attempts have been made by curettage, cauterization, etc., to bring about healing, but all to no effect. The urine still continues to leak and the parts show no tendency to heal.

One reason the fistula does not heal is due to the fact that where two hollow organs come together and there is a fistulous tract leading from one to the other they have to be separated in order to bring about a union. Here is the bladder and here is the rectum and a fistula in there will never heal up, but if we separate the two organs there will be a very good chance of the fistula healing. We have to separate the rectum from the bladder so that scar tissue will form between. After making a separation we will cut out the hard tissue and sew up the wounds, both in the rectum and urethra.

There is another difficulty with which we have to deal in these urinary cases: urine whenever it comes over a freshly-cut surface is sure to bring about infection and that is another reason why these fistulae about the bladder and urethra are very difficult to cure by plastic operation. The wound looks all right for three or four days, then infection takes place, the wound breaks down and does not unite. What we must do here, in order to avoid having the urine running out through these places, is to do a suprapubic cystotomy and drain the bladder through a tube so that the urine will not come in contact with the freshly united edges of the fistula. The operation which I am about to do on this patient was first suggested by Dr. Hugh H. Young, of Baltimore, several years ago, and was published in the *Johns Hopkins Hospital Bulletin* for 1906. He reported several cases which were successful and he makes a particular point of the necessity of diverting the urine from the surface of the new wound which is made, and with that idea in view I will first do a suprapubic cystotomy and then we will put the patient in the lithotomy position and go to work on the perineum.

Operation.

Preliminary Suprapubic Cystotomy.

The bladder explored with the finger, no stone is present. Urethral orifice somewhat small and contrasted but can be opened by using forcible dilatation with the finger. A rubber drainage tube is introduced through the abdominal wound and held in place with a suture. The bladder is sutured around the tube and the abdominal wound is closed with silver wire sutures.

The patient is placed in the lithotomy position and a probe is inserted through the perineal fistula into the rectum and a sound is passed into the bladder. Incision made transversely across the perineum along the line of the operation scar exposing the entrance of the fistula into the rectum.

The scar tissue is excised as much as possible and the edges of the fistula freshened and closed with fine sutures in several layers. The orifice of the urethral fistula is treated in the same way but the rectal wound is most important. The levator muscles are now drawn together with two or three sutures of catgut and a gauze tampon is placed in the center part of the wound. The operation is finished by closing the skin wound with silkworm gut sutures.

The after treatment is of prime importance in order to secure a good result.

The urine has of course been diverted by the suprapubic cystotomy so that it does not infect the perineal wound and the musclar contraction of the rectum must also be avoided by keeping the bowels from moving for a week by the use of a liquid diet and Dover's powder. At the end of six days the bowels should be made to move by a retained injection of oil and castor oil by mouth followed in two hours by magnesium sulphate. In this way the bowels can be moved with the minimum amount of straining.

32 Schermerhorn Street.

*Report 10 days after operation: Pains occurred with gradually lessening severity and frequenty for 5 days following operation, and for last 5 days patient has had no recurrence of the pains at all. Urine passing from pelvis of kidney now only contains a trace of pus and the wound in the flank is nearly healed. The pus in the urine from the bladder is very much reduced in quantity and the urine is nearly clear.

PNEUMOCOCCUS PERITONITIS; TRIFACIAL NEURALGIA; ACUTE APPENDICITIS.

From the Surgical Clinic of
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Brooklyn, N. Y.

Pneumococcus Peritonitis.

History.—Patient, female, eleven years old, enters the hospital because of a swelling and severe pain in the abdomen. Her trouble began ten days ago with severe pain over the entire abdomen, followed by vomiting, elevation of temperature and diarrhea. A physician was called in attendance two days later, who diagnosed appendicitis and advised operation *after the pain subsided.*

During the following week she was treated with vaccines which were administered four times. After a few days the pain, vomiting and fever subsided, but the local abdominal conditions presented a tumefaction just below the umbilicus, and the patient became cachetic. At the end of ten days the pain again became severe, the swelling pronounced, and the mass fluctuating. A second physician was called and advised that the patient be sent to the hospital. On admission, temperature 104, pulse 135, respirations 35.

Examination.—The abdomen is extremely tender and there is a well-defined ovid tumor in the median line extending from the symphysis to the umbilicus. This mass simulates an overdistended bladder and we will catheterize the patient as a preliminary precaution. Note that the quantity of urine is small, the bladder therefor is not the source of this tumor. As the tumor is palpated it gives evidence of fluctuation. It is probably an abscess, and appendiceal abscess in children is frequent; but the location, the size and symmetry of this mass does not suggest an appendiceal abscess.

Operation.—We shall make our incision in the median line—over the center of the mass. Note the thick, creamy pus with its *numerous fibrin flakes.* This is not the foul-smelling pus of appendicitis—this pus is oderless and contains fibrin flakes. It is the typical pus of a pneumococcus infection. The exudate has well walled off the cavity, and there is no connection with the appendical region. The clinical findings here all point to a pneumococcus peritonitis, and we shall await with interest the bacterial report. The pus is gently evacuated; no irrigation is used: drainage tubes are placed so as to reach the deepest possible point. The prognosis of this case is good.

Comment.—It should be noted that this affection is rare, it has a special predilection for children, usually between the second and twelfth years, and is much more frequent in girls.

It is a specific infection of the peritoneum, secondary to some preexisting pneumococcic lesion, such as a pleuro-pneumonia or an otitis media. To speak of a so-called primary form is simply to use an illogical term to indicate that the mode of infection is obscure. The action of the pneumococcus on serous membranes presents two peculiarities. It produces abundant suppuration and a precipitation of considerable fibrin, so that suppuration tends to become encysted. We note, therefore, that cases fall into two distinct groups, the encysted and the diffuse forms. The *encysted form* is the clinical type most frequently found in young children. The encapsulated pus is generally found beneath the anterior abdominal wall, in the median line, below the umbilicus. This pus-pocket may increase so as to form an enormous cavity pushing the intestines aside and walling itself off with a whitish gray membrane.

The exudate is usually thick, creamy, greenish-yellow and odorless, and presents numerous fibrin flakes. *The diffuse form* is rarer and more difficult to recognize, and the prognosis is much more grave. Here there is no limiting membrane; the pus is scattered throughout the abdomen. It is well to keep in mind, however, that pneumococcus peritonitis is the least grave form of acute peritonitis.

Symptoms.—In the encapsulated form the onset is sudden with intense abdominal pain, at first diffuse, and later centering about the umbilicus; vomiting, fever and diarrhea, characterized by its fetid odor. The general train of symptoms is that of the acutely infected abdomen. After a few days the pain, vomiting and fever abate, but the local abdominal conditions become more pronounced; the abdomen is distended and there is distinct swelling in the umbilical region; the child appears cachetic. It is well to note, however, that there is no muscular rigidity. After ten or twelve days the pain begins again; there is pronounced swelling, fluctuation and occasional edema of the abdominal wall in the region of the umbilicus, and if the process is not interrupted the skin is finally perforated and a quantity of pus is discharged. Thus the progress of the disease is in cycles, recognized by peritoneal invasion, accumulation of pus, and spontaneous rupture.

In the diffuse form the onset is likewise sudden—abdominal pain, vomiting, diarrhea and fever; but the symptoms are all accentuated, the prostration is intense and death may occur in forty-eight hours. As Stone observes, "the picture of peritonitis develops with interesting qualifications, rigidity as a rule being far less marked than the other symptoms would seem to justify, and there is diarrhea instead of constipation." The prognosis is grave and the result fatal unless the tide is stemmed by early operation.

Diagnosis.—It is evident that the encysted form presents a clinical picture which simulates appendicitis and with which it may be easily confused.

Note, however, that while the onset is the same in the two affections, in pneumococcus peritonitis the pain is more diffused; there is diarhhea rather than constipation, and the muscular rigidity of appendicitis is absent. In tuberculous peritonitis the fetid diarrhea is rare, the swelling evolutes more slowly, the lesion is less circumscribed, the masses are isolated and there is evidence of ascitic fluid. In the diffuse form the diagnosis is always difficult, but the indications are never obscure, and no time need be spent upon the etiology when the indications for surgical intervention are so apparent.

Trifacial Neuralgia.

History.—Patient, female, aged forty-nine, comes to the hospital because of severe spasmodic attacks of pain in right side of face, especially along the lower jaw. She has enjoyed good health up to two years ago, about the time of her menopause; since then she has had severe attacks of pain in the face and lower jaw. They have recently increased in severity, and are amenable to no form of treatment thus far administered. Thinking that the cause of the trouble might be in the teeth she has had the teeth removed one by one until all were extracted. During the attacks the most trivial cause will excite a spasm of

pain—a draft of air, an attempt to talk, touching the skin of the affected side, etc.

Comment.—These patients are among the greatest sufferers that come to us for relief. When we consider that the spasms of pain are so severe that they may not be able to wash the face for weeks; that the presence of food in the mouth excites intense pain in the lingual and dental nerves; that they can not even talk without arousing a spasm, it is little wonder that they are driven almost to desperation and insanity. We have seen a number of these cases, and the history here recited is a typical one.

I call your attention to the sex;—most of these cases are women—and usually after the menopause. Note also that the affection is on the right side. In a series of one hundred cases of facial neuralgia which we have personally treated, eighty were on the right side, the reason for this we have not been able to surmise.

Treatment.—The treatment of this affection has been extremely unsatisfactory, largely because it has been empirical, and necessarily so because the pathology is obscure. We don't know the etiology of trifacial neuralgia, and when the books talk about caries of the teeth, sinus disease, gout, etc., as possible causes, they are simply begging the question; for with these eliminated, the teeth extracted, the sinuses pronounced normal, and the patient drugged with salicylates, the spasms of pain continue with even greater severity.

What we do know is that there is no medicine that will give any permanent relief. Even opium will give but temporary relief, and this must be administered in increasing doses until the "habit" is formed.

Again, even the operative relief has given few satisfactory results.

Extirpation of the Gasserian ganglion is an operation so bloody and so dangerous that a surgeon would hesitate to recommend it unless the patient threatened suicide. And even after Gasserectomy the pain has been known to return with all its former severity.

Avulsion of the peripheral nerves gives no security of freedom from pain for a length of time that makes the procedure worth while.

After experimenting with the various operative procedures for the past ten years we have arrived at the conclusion

1. That there is no treatment of trifacial neuralgia that is entirely satisfactory.
2. That the quickest, safest and most satisfactory procedure as yet at our command is the *injection of the nerve trunks with alcohol,* according to the method of Schlösser.

We have had this method on trial now for five years and have given over two hundred and fifty treatments with more or less satisfactory results. After the treatment our patients have been free from pain on an average from two months to two years. The treatment, however, is so simple that the injection can be repeated whenever the pain returns.

We have somewhat deviated from the suggestions of Schlösser in no longer attempting to make deep injections into the first or second branches because of the danger and uncertainty. These branches we inject directly through their superficial exits, the supraorbital and infraorbital foramina, which are found respectively at the junction of the inner and middle third of the supra and infraorbital ridges. (Fig. 1, A and B.) The third branch we invariably inject deeply—as it exits from the foramen ovale at the base of the skull.

The solution used contains:

Cocain Hydrochlor	gr. i
Chloroformi	m. x
Alcohol, 80 per cent	oz. ss

Of this solution we inject about 2 cc.

Operation.—No preliminary anesthesia is used, for the reason that the best evidence of a successful puncture is the spasm of pain, numbness and anesthesia over the course of the nerve successively reported by the patient.

The patient suffers considerable pain during the injection, but these patients are accustomed to excruciating pain and are willing to undergo temporary suffering if relief is the reward. From the symptoms which this patient reports she is evidently suffering from neuralgia of the third division; we shall, therefore, endeavor to inject this nerve as it makes its exit from the foramen ovale at the base of the skull. Let us prepare the field by painting the skin with iodine.

You will notice that the needle used is marked to a scale of centimeters so that we know accurately just

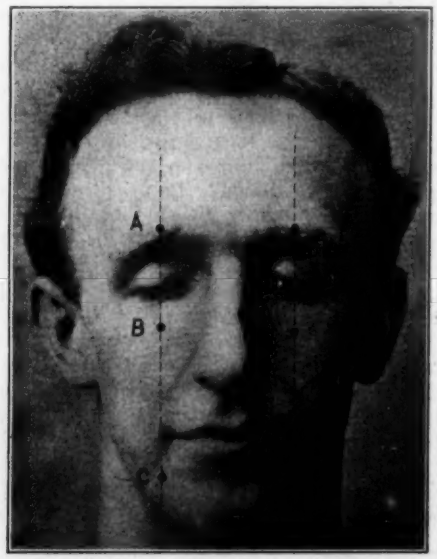

Fig. I. Position of the (A) Supra-orbital, (B) Infra-orbital, and (C) Mental Favamina on a vertical line.

Fig. II. Position of needle for deep injection of the third division of the trifacial nerve.

how far the needle penetrates. We now insert the needle at the lower border of the zygoma, ½ cm. in front of the condyle of the jaw (Fig. 2). We push the needle directly inward and slightly downward for a depth of 4 cm., at which distance the point of the needle should be at the foraman ovale. You note that the patient is now suffering a severe spasm of pain—pretty good evidence that the point of the needle is in the neighborhood of the nerve. We very slowly inject about 2 cc. of the solution—this causes excruciating pain at first, but you observe that it gradually subsides as the needle is withdrawn. We now make a test of the sensitiveness of the skin along the lower jaw; the patient says she has no feeling in that part of the face—a further evidence that the injection has been successful.

Comment on the Operation.—Ecchymosis and swelling are to be expected, and trismus following injection of the third division is to be anticipated, but they are never more than a temporary inconvenience.

Although in the majority of cases the pain is almost immediately relieved, in a few instances the pain is worse after the injection and may continue for a few days. This condition is undoubtedly due to increased swelling of the parts in the vicinity of the nerve and subsides as the swelling decreases. In one of our cases intense pain followed deep injection of the third division and continued for four days, after which the pain disappeared, and the patient is entirely free from pain for the first time in ten years.

Let me impress upon you that the solution used should be freshly prepared for each treatment. The ingredients undergo rapid chemical changes.

Acute Appendicitis.

History.—Patient, male, twenty-four years old enters hospital because of a severe pain in the abdomen. The patient was perfectly well until two days ago when he was suddenly seized with severe pain all through the abdomen. A few hours later he vomited, and the pain localized in the lower right quadrant of the abdomen. A physician was called who prescribed a cathartic and gave a hypodermic of morphine to relieve the pain. On entering the hospital patient's temperature is 103, pulse 110, respiration 32. On the right side of the abdomen there is muscular rigidity and exquisite tenderness over McBurney's Point.

Operation.—The history is one typical of acute appendicitis which palpation of the abdomen amply confirms.

We shall make our incision along the outer border of the right rectus muscle. This incision we always employ in acute cases, as it gives us a better exposure of the parts and can be extended upward or downward without weakening the abdominal musculature. The gridiron incision of McBurney we reserve exclusively for interval operations on chronic appendices.

Having opened the peritoneum you naturally conclude that we now hunt for the appendix. That is what we do *not* do, for *if you want to find the appendix don't search for it.* It is a distressing sight to see some operators clawing in the abdominal cavity trying to find this elusive little organ. *Find the cecum,* and you have the key to the situation—the appendix is the tail of the cecum.

Here is the cecum presenting in the wound; we recognize it by its color—gravish blue, its anterior longitudinal band, its sacculated form. Follow down the longitudinal band; it leads to the base of the appendix. Here is the little joker which now presents in the wound; it is not yet ruptured, but it is battle-scarred. Observe that it is infiltrated, distended, with multiple points of necrosis. We will wall off the operative field with laparotomy sponges and the remainder of the operation will be practically extra-peritoneal.

We first ligate the meso-appendix with catgut and free the appendix from its attachment. Next we apply clamp to the base of the appendix and place a ligature of catgut about the base of the appendix in the groove made by the clamp. The appendix is now excised and the stump disinfected with iodine. I think we can close this wound without drainage.

Comment.—There is one phase of this history to which your attention should be called, viz.: the preoperative treatment; by that I mean *the treatment that is given before the surgeon sees the case.*

It is the merest folly to teach that there are two methods of treating appendicitis—that the family physician is to carry the case along as far as he can; and when his medication proves futile, call in a surgeon to inaugurate an entirely different method of treatment.

There is only one treatment of appendicitis; in this treatment the physician and surgeon each plays an important role—the role of coöperation—each bears an equal responsibility, and each contributes his share to the favorable or unfavorable result. The results of the modern treatment of appendicitis, favorable as they are, can never be what they should be until the physician and surgeon are reconciled in a unity of purpose and a uniformity of procedure.

There is no medical and surgical treatment of appendicitis. *The treatment is preoperative and operative.* This definitely fixes the status of the physician and surgeon; the one prepares the patient for operation, the other performs the operation. The preparation is just as important as the operation, and the operative results will not improve until the surgeon receives the patient rationally prepared.

This is what I would emphasize—*when the physician suspects appendicitis his further treatment should be directed toward* preparing the patient for operation; *that means putting the patient in the best possible condition to receive the benefits of operation.*

You will note in this history that the physician, in spite of the indubitable evidence of appendicitis, administered a cathartic—this is wrong, all wrong! The physician must appreciate that the aim in all acute abdominal conditions is to put the gastrointestinal tube in a state of quiescence; that the great disturbing factor is peristalsis, and that everything that stimulates peristalsis is to be eliminated. *The introduction of food and the use of cathartics are the two disturbing elements;* the use of either increases peristalsis and hence helps to distribute rather than localize the infection.

A purge is the most deadly medication that can be employed in any acute abdominal condition. Whenever an acute abdominal lesion is suspected the patient's mouth should be promptly closed and kept closed until a positive diagnosis is made—much damage is done by the common practice of prescribing a cathartic for symptoms of presumed acute indigestion without first making an abdominal examination.

394 Clinton Avenue.

Wossidlo & Frank advise for the abortive treatment of gonorrhea daily irrigation of the anterior urethra with a 1 to 1000 albargain solution.

SCIENCE FROM THE PAGES OF SAMUEL PEPYS.

JAMES FREDERICK ROGERS, M. D.,
New Haven, Conn.

On December 31, 1664, Pepys makes this entry in his diary: "I bless God, I have never been in so good plight as to my health these ten years, as I am at this day. But I am at a losse to know whether it be my hare's foote, or taking every morning of a pill of turpentine, or my having left off the wearing of a gowne." For January 20th following he writes: "Mr. Batten * * * showed me my mistake that my hare's foote hath not the joynt to it; and assures me he never had his cholique since he carried it about him: and it is a strange thing how fancy works, for I no sooner almost handled his foote * * * but, whereas I was in some pain yesterday and tother day, and in fear of more today, I became very well." He accordingly secures "a fresh hare's foote" with "the joynt to it" after the manner of Mr. Batten.

At the beginning of the year he had, after ransacking some old papers, entered as worthy of preservation in his journal, some "charmes:" "For Stenching of Blood," for "A Thorne," for "A Cramp," and for "A Burning." Here are two of these "charmes:"

For a Thorne—

"Christ was of a virgin born,
And he was pricked with a thorn,
And it did neither bell nor swell;
And I trust in Jesus this never will."

For a Burning—

"There came three Angells out of the East,
The one brought fire, the other brought frost—
Out fire; in frost.
In the name of the Father, and son
and Holy Ghost.
Amen."

Upon saying good-bye to Mr. Rolt who was leaving for the war with the Dutch, he observes "it was an ominous thing, methought, just as he was bidding me his last adieu, his nose fell to bleeding, which ran in my mind a pretty while after."

Could a believer in the efficacy of the rabbit's paw, a chanter of incantations (for we are led to guess that Pepys preserved these "notes" for more than their curiosity) and a seer of signs, be considered in any sense scientific? And yet the diarist within two months of the last hare's foot entry was elected a Fellow of the Royal Society, in another four weeks he gave an account before that body, of some information he had acquired from a sea captain concerning "pendulum watches," while twenty years later he was made its president.

In the words quoted there is to be detected a slight note of suspicion as to the merit of his amulet, and questioning is the foundation of scientific thinking. Then Pepys had those other essentials for the acquisition of knowledge; enthusiasm and unlimited curiosity. He was fully aware of possessing this latter trait, and records it in his inimitable way: "I sent my boy [ashore] who like myself, is with child to see any strange thing."

Pepys was always open to curious information. At a dinner "One Mr. Templer (an ingenious man and a person of honour he seems to be) dined; and, discoursing of the nature of serpents, he told of some that in the waste places of Lancashire do grow to great bigness, and do feed upon larks which they take thus:—They observe when the lark is soared to the highest, and do crawl till they come to be just underneath them; and there they place themselves with their mouths uppermost, and there, as is conceived, they do eject poyson up to the bird, for the bird do come down again in its course of a circle, and falls directly into the mouth of the serpent; which is very strange. He is a great traveller; and, speaking of the tarantula, he says that all the harvest long (about which times they are most busy) there are fidlers go up and down the fields everywhere, in expectation of being hired by those who are stung."

The opening words of the diary, "Blessed be God, at the end of the last year I was in very good health," indicate that health was a matter of prime importance to the diarist as it is to his twentieth century readers. Pepys' exclamation was the more fervent in that he had but recently been relieved from the disease of the age, stone in the bladder. Survivors of less serious procedures of twentieth century surgery, celebrate the benefits of the use of the knife, and we need not smile at Pepys' annual rejoicing over the result of an operation which even to-day, with aseptic precautions and under an anesthetic, is not undertaken lightly by any surgeon.

The method of celebration which the diarist employed did not tend to prevent a return of the affliction, for it was undoubtedly begot of high living, of many meats and much wine. There can be no doubt of Pepys' fondness for both. The science of dietetics had not developed and he was not therefore theoretically wiser. In an age when spirits are under the ban and we are constantly told that we over-eat, especially of meats, it makes our mouth water to read of Pepy's being "very merry, with a special good dinner, a leg of veal and bacon, two capons and sausages and fritters, with abundance of wine." On another occasion "We had a lovely chine of beef and other good things, very complete and drank a great deal of wine." "For my cutting of the stone * * we had a fricassee of rabbits and chickens, a leg of mutton boiled, three carps in a dish, a great dish of a side of lamb, a dish of roasted pigeons, a dish of four lobsters, three tarts, a lamprey pie, (a most rare pie), a dish of anchovies, good wine of several sorts, and all things mighty noble and to my great content."

These feasts cost Pepys a pretty penny and by comparison we cannot see that the cost of living now, so far as meats and drinks are concerned, is much higher than in the seventeenth century. For a dinner for "Dr. Clerke and his lady, his sister, and a she-cozen and Mr. Pierce and his wife," he "had for them, after oysters, at first course, a hash of rabbits, a lamb, and a rare chine of beef. Next a great dish of roasted fowl, cost me about 30s, and a tart and then fruit and cheese. My dinner was noble and enough * * * I believe this day's feast will cost me near £5."

Pepys' pantry, like the pantries of some of the rest of us, was not overflowing every day, and a few entries later we read, "So home and eat something such as we have, bread and butter and milk." That phrase "such as we have" contains volumes of meaning.

It was an age of animal foods and alcohol, and Pepys was the victim as much of custom as of appetite. He was fond, however of milk-meats and one of his favorite dishes was nothing more nor less than "a dish of creame with brown bread." There were evidently those who argued for a vegetarian diet, though their voice was not loud in the land, for Pepys hears "a very pretty discourse concerning Nature's fashioning every creature's teeth according to the food she intends for them; and that man's, it is plain, was not for flesh, but fruit * * * and that all children love fruit, and none brought to flesh, but against their wills at first."

Returning to the cost of living, Pepys pays 4s., 6d.

for a "a good soup and pullet;" oranges, to which he frequently treats his actress friends, were 6d, apiece and cherries cost him 2s. per pound. Grapes he saw for the first in September, 1661—"The grapes are a rare thing." English hot house grapes were not yet on display in the fruit shops of Boston and New Amsterdam.

Another novelty for Pepys was tea, "I did send for a cup of tee (a China drink) of which I never had drunk before." The name of the medical profession was dragged into the advertisement of this new drink and the following notice which appeared in a weekly paper of 1658 reads very familiarly: "That excellent and by all Physitians approved China drink, called by the Chineans *Tcha,* by other nations [the Irish nation?] *Tay,* alias *Tee,* is sold at the Sultaness Head, a copheehouse, in Sweetings Rents, by the Royal Exchange, London." Some years later on coming home he finds his wife "making of tea; a drink which Mr. Pelling, the Potticary tells her is good for her cold and defluxions."

The following entry, after a visit to Magdalen College, Oxford, will appeal to all, for Pepys finds that the butler's man, was "son of Goody Mulliner over against the college, that we used to buy stewed prunes of."

Cucumbers there were in Pepys' time and we meet with this sad entry: "Mr. Newburne is dead of eating cowcumbers, of which, the other day, I heard another, I think Sir Nickolas Crisp's son."

The sciences of hygiene and sanitation had not advanced far. Even the King is served drink by Lord Barkshire "in that dirty pickle as I never saw man in my life." And Sir George Carteret finds it wise to carry his own drinking glass and napkin when he travels.

Here is an interesting entry: "Got my wife to cut my hair and look my shirt, for I have itched mightily these six or seven days, and when all comes to all she finds that I am lousy, having found in my head and body about twenty lice, little and great, which I wonder at, being more than I have had I believe these 20 years."

There was of course no vaccination for smallpox and that disease was as common then as measles to-day. "Our family is mightily disordered by our little boy's falling sick the last night; and we fear it will prove the smallpox." But the disease is not partial to little boys, and, "this day I do hear that the Duke of Monmouth is sick, and in danger of the smallpox." The Duke of York has it but recovers and "Blessed be God! he is not at all the worse, but is only a little weak yet."

Smallpox they had with them always, but a less common scourge was coming. On June 7, 1665, there is this historic entry: "This day, much against my will I did in Drury Lane see two or three houses marked with a red cross upon the doors, and 'Lord have mercy upon us' writ there; which was a sad sight to me, being the first of the kind that to my remembrance I ever saw. It put me into ill conception of myself and my smell, so that I was forced to buy some roll tobacco to smell to and chaw, which took away the apprehension."

The "great Plague" had begun.

Pepys' resort to tobacco in this instance needs some explanation. The leaf had but recently been introduced into England, and its magical powers as a drug, both for purposes of cure and prevention, were believed to be well nigh unlimited. No doubt the diarist feared that some odor, real or imaginary, which was dispelled by the pungent scent of tobacco, might be the effluvia of the dread disease. Besides tobacco smoke, other useless "fumes" were used as disinfectants for contagious diseases.

The plague was not unexpected. It had been ravaging the continent and an effort had been made to prevent its entry into the island, for Pepys had noted nearly a year earlier, "The Plague, it seems, grows more and more at Amsterdam; and we are going upon making of all ships coming from thence and Hamburgh, or any other infected places, to perform Quarantine (for thirty days) in Holehaven, a thing never done by us before." The foundations of international sanitary science had been laid.

Twenty-two days after seeing the "sad sight" of the red crosses Pepys writes, "This end of the town every day grows very bad of the plague. The Mortality Bill (for the week) is come to 267." It was later to reach near 10,000.

The real source of the infection was, of course, not to be discovered for near two centuries and a half, and we do not wonder that, after the scourge had waned, Pepys was fearful about donning his new periwig "bought a good while since * * because the plague was in Westminster when I bought it; and it is a wonder what will be the fashion after the plague is done, as to periwiggs, for nobody will dare to buy any haire, for fear of the infection, that it had been cut off of the heads of people dead of the plague."

Though it did not disinfect all the false hair, the great fire gave the city such a cleansing as no board of health could have done. We cannot to-day boast of overcleanliness in our cities, and often, as in the days of Pepys, "the ways are dusty, and the flyes fly up and down."

Medical science was helpless in the presence of the disease, though doubtless any number of sure cures and preventives were concocted by the enterprising pharmacists, for Pepys mentions, without comment, "a bottle of plague water" given him by Lady Carteret.

Bleeding and catharsis were the remedies for most ills. Pepys has himself "let blood" on one occasion merely as a matter of precaution, as he fancied his vital fluid had become too thick. He was also bled for his failing eyesight. When it came to taking physic the drugs were so powerful that it was often made a matter of vacation from work, that the patient might recover from the effects.

A cold was taken then, as now, by "sitting sweating in the playhouse, and the wind blowing through the windows on my head;" or by rising "betimes and abroad in one shirt, which brought [him] a great cold." For his colds he "took a thing * * namely a spoonful of honey and a nutmeg scraped in it * * which [he] found did [him] much good."

The following recipe for a poultice is doubtless in use to-day. "A good handful of bran, with a pint of vinegar and a pint of water boiled till it is thick and then a spoonful of honey put to it."

Pepys' cousin, Joyce, who tried to drown himself, was held up by the heels "to let the water out" and afterward "had pidgeons applied to his feet." These living foot-warmers are also mentioned as used as a last resort in the illness of Queen Catherine.

May dew was considered an excellent cosmetic. On the 22d of May: "My wife away to Woolwich * * to gather May-dew tomorrow morning, which Mrs. Turner hath taught her is the only thing in the world to wash the face with." On January 2, "My wife up and with Mrs. Pen to walk in the fields to frost-bite themselves." Doubtless this also was for the purpose of improving their appearance, but we are left in doubt as to the details.

The influence of the mind upon the body was not overlooked in the days of Pepys, and we read of how Sir Thomas Teddiman "is very ill in bed of a fever,

got, I believe, by the fright the Parliament have put him into of late." This might have been called a fear-of-the-gallows fever.

On June 23, 1660, Pepys writes: "So to my Lord's lodging * * and there staid to see the King touch people for the King's evil. But he did not come at all, it rayned so; and the poor people were forced to stand all the morning in the rain in the garden. Afterward he touched them in the banqueting house." Pepys makes no comment as to the efficacy of the cure, but there must have been much faith in it, as between 1660 and 1682, some 92,000 persons were said to have been touched.

Pepys had no fear of infection from kissing, and the fines he imposed upon himself for this indulgence were rather for the sake of preserving harmony in his own household than for the maintenance of health. Nor did the presence of death and two centuries of decay deter him from saluting Queen Catherine of Valois.

Those who are oppressed in the twentieth century by the prevalence of the social evil and its diseases, should read the diary for solace. We are told in more than one entry "plainly of the vices of the Court, and how the pox is common there." Fortunately, in our day there is no public display of damaged goods in governmental circles.

In veterinary practice Pepys makes the following interesting entry: "One of our coach horses fell sick of the staggers, so he was ready to fall down * * The coachman cut his tongue to make him bleed, and his tail" * * (but without effect and he) "believed he would presently drop down dead; then he blew some tobacco in his nose, upon which the horse sneezed, and by and by, grows well, and draws the rest of our way as well as ever he did; which was one of the strangest things of a horse I ever observed, but he says it is usual. It is the staggers."

The science of medicine was crude enough in the time of Pepys, for the reason that almost nothing was known of physiology. At the first meeting of the Royal Society after the abatement of the plague, Sir George Ent, discoursed pleasingly "about Respiration; that it is not to this day known or concluded on among physicians, nor to be done either how the action is managed by nature or for what use it is."

In 1666 Pepys witnessed before the Royal Society, the "pretty experiment of the blood of one dogg let out, till he died, into the body of another on one side, while all his own run out on the other side. The first died upon the place, and the other very well, and likely to do well." Had Pepys known it, this was to prove a most important as well as "pretty" experiment. It was not safely applicable in medical practice for the transfusion of human blood, however, until after two centuries and more, when the thing could be done without danger of infection.

At another time Pepys writes, "to the Royall society and there saw an experiment of a dog's being tied through the back, about the spinal artery, and thereby made void of all motion, and the artery being loosened again, the dog recovers."

At another meeting of the Society he witnessed "an experiment of killing a dog by letting opium into his hind leg." The scientists "did fail mightily in hitting the vein, and in effect did not do the business after many trials; but with the little they got in, the dog did presently fall asleep, and so lay till we cut him up, and a little dog also which they put it down his throat, and then fell asleep, and so continued."

The condition of the blood was considered, not without some ground, to a large extent responsible for mental states, and the following experiment seems very much advanced for the time. "A man that is a little frantic" [violently insane?] "a poor and debauched man," was hired by the College for twenty shillings "to have some of the blood of a sheep let into his body. * * * They purpose to let in about twelve ounces, which, they compute, is what will be let in in a minute's time."

Pepys witnessed the deadliness of nicotine: "So out to Gresham College, and saw a cat killed with the Duke of Florence's poyson, and saw it proved that the oyle of tobacco drawn by one of the Society do the same effect, and is judged to be (and was) the same thing with the poyson both in colour and smell and effect. I saw also an abortive child preserved fresh in spirits of salt."

On another occasion he listened to a lecture, illustrated by dissection, upon the kidneys and the formation of the stone, a matter of especial interest to himself.

The surgeons of the day were bold and besides "cutting for stone" they did not hesitate to open the brain case, and Pepys reports how "the Prince was trepanned, and having cut through the outer table they find the inner all corrupted * * no ill accident appeared in the doing of the thing, but all with all imaginable success."

The microscope had been invented and on August 13, 1664 "there comes Mr. Reeve with a microscope and scotoscope." "For the first I did give him £5, 10s., a great price, but a most curious bauble it is, and he says as good, nay, the best he knows in England, and he makes the best in the world. The other he gives me, and is of value; and a curious curiosity it is to look objects in a darke room with." That evening he reads in "Dr. Powers' book of discovery by the microscope to enable [him] a little how to use and what to expect from [his] glasse." He writes next day: "Finished Dr. Powers' booke of the Microscope, very fine and to my content, and then my wife and I with great pleasure, but with great difficulty before we could come to find the manner of seeing anything by my microscope. At last did with good content, though not so much as I expect when I come to understand it better." He also purchased Hookes' "book of microscopy," and this author was none other than Robert Hooke the discoverer and namer of the vegetable cell.

Pepys was greatly interested in the parellelegram, an instrument for reducing or enlarging drawings, and was much mystified by an exhibition of Prince Rupert drops.

The thermometer was a recent invention and in 1663 the entry appears, "This day Greatorex brought me a very pretty weather-glass for heat and cold."

He was given in 1668 a "glass bubble to try the strength of liquors with." This was the hydrometer invented by Robert Boyle. Pepys was greatly interested in Boyle's "book of colours," "only troubled that some part of it, indeed the greatest part, I am not able to understand for want of study." Later he finished the "book of colours, which is so chymical, that [he] can understand but little of it," but understands enough "to see that he is a most excellent man."

On August 8, 1666, Pepys "discoursed with Mr. Hooke about the nature of sounds, and he did make me understand the nature of musicall sounds made by strings, mighty pretty; and told me that having come to a certain number of vibrations proper to make any tone, he is able to tell how many strokes a fly makes with her wings * * * by the note that it happens to in music. That, I suppose, is a little too much refined, but his discourse in general of scund was mighty fine."

King Charles poked fun at the Society "for spending time only in weighing the ayre, and doing nothing else since they sat," but the King was not unsympathetic to the advance of knowledge and he did some experimenting on his own hook, for, says Pepys, "I observed that the King's curiosity which he usually hath of weighing him, and I was told it was to weigh him after he had done playing; * * Mr. Ashburton told me it is only the King's curiosity which he usually hath of weighing himself before and after his play, to see how much he loses in weight by playing; and this day he lost 4½ lbs." Of course it was of more importance to weigh a king than to weigh the air.

Science had advanced so far as to invent a mousetrap, for our author records that he "bought two mousetraps of Thomas Pepys."

In December, 1667, we find this entry: "The snow upon the ground all day my eyes are very bad and my Lord Bruncker do advise as a certain cure to use green spectacles which I do."

As Pepys' vision began to fail through his writing by candle light, the subject of optics became of paramount interest to him. He saw Lowre (who became a distinguished surgeon) "dissect several eyes of sheep and oxen, with great pleasure, and to [his] great information." Soon after this occasion he tried a pair of the "tubulous spectacles (an easy help for decayed sight)" which had just been introduced. He also had made for himself a cumbersome combination of these paper tubes with lenses enclosed, but without much benefit to his vision.

In peering through the magic medium of Pepys' pages, some of the brightly illumined figures seem so familiar, and the incidents of such recent happening, that we are led to look more carefully to be sure we are not watching reflections from our own twentieth century side of the glass. We also, have our superstitions and fads, our charms and incantations, which readers, two centuries hence, of our diaries (if any of them survive so long) may smile over.

While the misinterpretations of phenomena in the age of Pepys add picturesqueness to his pages, the reader cannot but regret that, either along the lines of optics, or of illumination, there had not been more progress, so that his inimitable record could have been continued through many a volume more.

447 George Street.

FALLACIES IN DISINFECTION.

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As prominent health officials throughout the country have freely expressed themselves in favor of the standardization of disinfectants, physicians will be interested to know that Senator William J. Heffernan of Brooklyn will introduce a bill at the next session of the New York Legislature to regulate the manufacture and sale of all such products. The law as it now stands in every State, except Maryland, permits the sale of disinfectants which do not disinfect, and as a result the market is flooded with preparations having no germicidal efficiency whatever; yet State control of disinfectants is as vital to the welfare of the public as is the official supervision of pure food products. Bichloride of mercury has long been considered the most powerful germicide available; yet the arguments against its use should convince the most conservative that its application in this connection should be abandoned. "Like chloride of lime," says a recent writer on the subject, "it has one fatal disability, and that is its well-known incompatability with soap, serum and albuminous matter. Another objection to its use is its extreme toxicity, for though with careful handling this objection need not prove insuperable, it will probably be admitted that, other things being equal, a nontoxic disinfectant is always preferable to a toxic." Many medical men, however, have long ceased to employ carbolic acid in general practice, owing to its low efficiency and the many accidents and fatalities which have resulted from its use. "Expert opinion differs widely as to the bactericidal value of formaldehyde. The marked discrepancies in the results obtained over a long period of years by experienced observers have tended to raise doubts as to its general efficiency."

"Chloride of lime belongs to that group of disinfectants which act by oxidation. The three principal representatives of this group are permanganate of potash, hydrogen peroxide and 'chloride of lime.' In the absence of organic matter all three are efficient disinfectants, but when organic matter is present—a condition which always obtains in actual practice—the efficiency disappears."

"Aerial disinfection or fumigation by the production of sulphur dioxide, either from burning sulphur or from a solution of sulphuric acid, is still used in many places, in spite of the fact that it has been repeatedly condemned by scientific experimenters generally."

"Sternberg characterized the use of sulphur dioxide as a farce; Dr. Alvah H. Doty in his *Prevention of Infectious Diseases* says, 'sulphur dioxide at best can only be employed for superficial disinfection and should never be depended upon to penetrate.'"

Many of the most extensively advertised proprietary disinfectants are practically devoid of germicidal action, and wholly so when diluted as recommended by the manufacturers.

Thousands of lives are sacrificed and hundreds of thousands of dollars are wasted annually in the United States because of the use of preparations that have not the power to disinfect. This is due directly to the lack of laws standardizing and controlling disinfectants.

The proposed bill provides that all disinfectants made or sold in New York State shall bear labels showing the relative germicidal power of such preparations as compared with pure carbolic acid. The other sections of the measure deal with adulteration and misbranding and the bill also provides heavy penalties for violation of the law.

The movement in favor of official control of the manufacture and sale of disinfectants is interesting prominent officials throughout the country, as indicated by their requests for copies of the Heffernan bill, with a view to similar legislation in their respective States.

396 Franklin Avenue.

Prurigo.

Acidi Hydrocyanici Dil.	f. ℥ij
Sodii Boratis	℥j
Aquæ Rosæ	f. ℥viij

M. Sig.: Apply locally.

—HOWARD FOX.

Acne Rosacea.

The following is known as Kummerfeld's Lotion:

Sulphuris Praecip.	℥j
Pulv. Camphoræ	gr. x
Pulv. Tragacanthæ	gr. xx
Aq. Calcis	f. ℥ij
Aq. Rosæ	f. ℥ij

M. Sig.: Shake. Apply every few hours.

THE PHYSICIAN VS. THE MIDWIFE IN THE MATTER OF OPHTHALMIA NEONATORUM.

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New York.

The Committee on Prevention of Blindness, recently followed up one hundred and eight cases of ophthalmia neonatorum which had been reported to it from various eye hospitals. It found that 62 of these occurred in the practice of physicians, and only 43 in the practice of midwives, 3 being emergency cases without any attendance.

So far as could be ascertained only 13 of the 43 doctors concerned had used prophylactic measures at first, and only 12 of the 43 midwives. Serious injury to the eyes resulted in 11 of the 108 cases; 3 becoming totally blind, while 8 became blind in one eye. The 3 cases of total blindness occurred in the practice of physicians, being treated by them in the home, while 6 of the 8 cases in which one eye was lost also occurred in the practice of physicians, the remaining two being midwife cases.

In another group of 33 cases investigated by this committee it was shown that in 22 the attendant was a physician, while only 11 were under the care of midwives. But one of the 22 physicians had made any effort to prevent ophthalmia.

The Massachusetts Charitable Eye and Ear Infirmary reports 116 cases of ophthalmia neonatorum, of which 114 were attended by physicians and two by midwives.

Ophthalmia neonatorum has been in the past so serious a disease that 25 per cent. of the blind in institutions the world over are said to have lost their sight in consequence of it, while there are probably as many more people who have sustained from it injuries more or less serious but not enough to make them public charges.

It can be practically abolished.

The statistics of the large lying-in hospitals show that the simple instillaation of a few drops of one per cent silver nitrate has reduced the occurrence of the disease from 4 or 5 per cent to less than a quarter of 1 per cent.

The statistics with which I began this paper raise two very interesting and important questions: *Why do physicians apparently neglect to take precautions against ophthalmia to a far greater extent than do midwives* who, as a class, are admittedly ignorant and dirty, and when cases do occur *why are their results apparently so much worse so far as sight is concerned?* The neglect of precautions on the part of physicians as well as midwives has been ascribed to ignorance, but that can hardly be true, because the Crede method has been taught in all the text-books on obstetrics for the past fifteen or twenty years, while cases occur just as often to the recent graduates as to the older ones. Some others ascribe the neglect to carelessness, and this is probably partly true. Even without prophylaxis the probability of the infection of the child's eyes at birth must have been tremendously reduced by the personal cleanliness of the modern woman as compared with her forbears. This is, of course, particularly true of the middle class women who are to-day trained to consider dangerous many symptoms which to their mothers would have been mere inconveniences.

Partly as the result of this and partly because of the more serious attitude of both patient and physician toward parturition, ophthalmia neonatorum has become very infrequent in the better grades of private practice, even in the entire absence of any conscious effort to prevent it. Many a physician has enjoyed a large general practice for fifteen or twenty years and never seen a case, and it is perfectly natural that he should regard ophthalmia neonatorum as a disease the dangers of which are far more imaginary than real. But there is another, and as it seems to me, far more probable, reason for the neglect. Most of the text-books on obstetrics and on ophthalmology treat ophthalmia neonatorum as practically a venereal disease which can occur to the new-born child only when its mother has been previously infected with gonorrhoea presumably received through the medium of her husband. This is an idea that is being assiduously taught not only to the physician but to the general public, by the various societies organized in the interest of eugenics, the suppression of the social evil, the single standard of sex morality and the like, in which medical half truths are used as very potent arguments.

The midwife may neglect precautions through ignorance or carelessness but for the most part she employs them as part of the routine in which she has been trained and to avoid penalties which she knows can be readily enforced.

The general practitioner, however, who has been taught to exercise his own intelligence and who believes that Ophthalmia Neonatorum can occur only where the mother has previously been infected with gonorrhoea, fail to appreciate the logical necessity for the use of any prophylactic in cases where he has moral certainty that no such infection has existed.

But this venereal theory of the disease does not hold true. Sidney Stephenson, in his very exhaustive monograph on the subject, in which he examined the statistics of many thousand cases, found that ophthalmia neonatorum was caused by the gonococcus in only about 64 per cent. of the total number of cases, the other 36 per cent. being due to various other pyogenic organisms which might be present in any vaginal discharge. Even this percentage varied very widely in various localities and institutions. In the ophthalmological and lying-in hospitals and dispensaries, where the attendance was largely made up of the uneducated, the unclean and the vicious, the severer cases naturally predominated, the percentage of gonorrhoeal eye infections ran very much higher than sixty-six, while in general practice, and in communities where the general standard of living and intelligence was above the average, the percentage of gonococcus cases was as low as 20 or 30 per cent.

If ophthalmia neonatorum is not a venereal disease; if it is liable to follow infection of the eyes of the new-born child with pus-organisms, which even a perfectly healthy woman might harbor, then the prophylactic measures ought to be employed in every single instance; but they will not be so employed so long as the general practitioner and his patients believe that the disease is an ocular gonorrhoea the occurrence of which is a sure indication of a previous delinquency on the part of the father or the mother of the new-born child.

In the series of cases which were reported at the beginning of this article, practically all the eyes in which the disease resulted in loss of sight occurred in the practice of physicians and were treated by them without removal to any hospital. This may be due, of course, to the fact that the midwife, glad to be rid of the responsibility of such a condition refers it at once to a hospital or to a physician, so that in the end all the bad cases are credited to the physician. But my experience leads me to believe that many a midwife, afraid of the consequences of a tardy report, takes care of the case throughout if it is not too severe.

I think we can explain the poor results of the family physician and perhaps of the specialists as well in a much more probable way.

The family physician considers ophthalmia neonatorum as a modified type of the gonorrheal ophthalmia of adults, which he knows to be the most virulent and dangerous infection the human eye can have. Dealing with an infection of this sort he feels justified in using the most extreme measures.

The ordinary directions given in his text-books involve the constant care of a trained nurse, cleansing applications made to the eyes every hour, day and night, the frequent eversion of the lids, the application of strong solutions of nitrate of silver and other germicides, and often the removal of the new-born child to the hospital, whether it cannot always be accompanied by its mother, and, therefore, is deprived of the opportunity of breast feeding.

But ophthalmia neonatorum is an entirely different disease from gonorrheal ophthalmia in the adult. Whether the mother has been infected with the gonococcus or one of the other pyogenic organisms she has, in time, acquired a partial systemic immunity to the particular germ which she harbors, and during the long period of intra-uterine life the child acquires the same partial immunity which its mother enjoys. As a result, ophthalmia neonatorum is ordinarily a comparatively mild infection and its natural tendency is to get well. Furthermore, there is probably a very large percentage of children whose immunity is so great that, though infected at birth, they never manifest any of the clinical symptoms of the disease at all.

Dealing with this chronic and rather mild type of congenital infection, the result ought to be good, almost invariably, and it is my firm belief that very many more eyes are lost through the violence of the treatment than through the violence of the disease itself. The one great danger is ulceration of the cornea which is certain to result in scar tissue and defective vision at the best, and commonly proceeds to perforation and total loss of sight. But the outer layer of the cornea is very resistent and unless its vitality is impaired by continuous pressure from tight lids or the pressure of ice bags, or is actually abraded by clumsy hands or strong caustics, the prognosis is good. The watchword should be cleanliness and drainage and gentleness. I believe it is perfectly proper for the general practitioner to treat the case if he knows how, but I have seen too many cases of iritis mistaken for conjunctivitis, and of glaucoma mistaken for neuralgia or for cataract to take the ophthalmological knowledge of the family physician too much for granted. I believe many cases can just as well be treated at home as in a hospital. The nutrition of the child is all important, and it should certainly not be separated from its mother. I would rather trust the solicitude and gentleness of some near relatives, under proper supervision, than the clumsy ministrations of some nurses with no ophthalmological training. But physician and midwife and public must be made to realize that ophthalmia neonatorum cannot occur even in the worst regulated families if Crede's prophylaxis is used while without it it may occasionally occur in the best. When it does occur it need not necessarily discredit either parent but always the attending obstetrician.

40 East 41st Street.

Compound tincture of benzoin is a failure for internal use, and while it may have value as an inhalant, the aloes it contains are out of place. It would also be better without the irritant action of storax.

LARYNGEAL DIPHTHERIA.

F. Ward Langstroth, M. D.,
Ridgefield Park, N. J.

I desire to review a case which has recently occurred in my practice and attempt to draw an important lesson therefrom.

I was called one Thursday morning to see Mr. X., 38 years old, married. He complained that he had been suffering from a slight cold for a few days and that the previous day he had become quite hoarse. At the time he could not speak above a whisper. He had a tight hacking cough. He was about the room and said that except for his throat he felt perfectly well. Temperature was 98.6° and pulse 78. Heart and lungs were normal. I made a careful examination of the patient's throat without a mirror and beyond a moderate amount of redness the throat seemed perfectly normal. He stated he had had two or three attacks similar to this in the past. I ordered a spray of 20 per cent. solution of argyrol to be used every two or three hours and ammonium chloride and ammonium carbonate in solution to be taken internally.

The following morning he was around the house and ate a substantial breakfast and felt perfectly well except that his throat was sorer. He expectorated considerable mucus during the night. The temperature was still normal and the pulse was 80. I examined the throat with a laryngeal mirror with reflected light, but found it impossible, as I generally find it when away from one's special nose and throat appliances, to get much of a view of the larynx. I was unable to see anything of a pathologic nature. So far there was nothing about the case to lead one to expect any condition other than acute laryngitis. The patient was advised to continue his treatment and report to me if the condition became worse. That evening his wife called me on the phone and said that Mr. X.'s throat was worse but did not think it was necessary for me to call before morning. Considering the possibility of a laryngeal diphtheria I talked with a laryngologist in New York who has seen a vast amount of diphtheria, in reference to using antitoxin. After describing the case thoroughly he said that to him the case suggested only a simple laryngitis, and he thought antitoxin unnecessary.

Saturday morning, forty-eight hours after I had first seen the case, I found the patient had had a very uncomfortable night and was feeling somewhat worse. He was in bed with a temperature of 100° F, and a pulse of 90. His breathing was embarrassed although his respirations were not over 20 per minute. He had also coughed up some blood and firm pieces of tissue which I believed to be membrane.

I took a culture and advised the immediate use of antitoxin, explaining to the patient that I feared that he had a diphtheritic infection. He refused absolutely to allow me to use the antitoxin stating that he did not believe that this attack was different from the others. I then telephoned the New York laryngologist so that he could tell the patient's wife the trouble that might follow the non-administration of antitoxin. To my surprise although I described to him the change in the symptoms he still felt doubtful and while he assured the wife that the antitoxin was harmless he did not urge its use strongly enough to strengthen me much in my position. At 1 p. m. the patient had a temperature of 101° F. and a pulse of 100. and as he still refused antitoxin I insisted that I should give up the case or have a consultation to relieve myself of the

entire responsibility. The consultation was agreed to with a well known practitioner in a neighboring town and I took along 5,000 units of antitoxin.

I explained to the consultant the facts in the case but I soon perceived from the character of his questions and the amount of stress he placed upon the former attacks of laryngitis that he did not agree with me and did not consider the case of a serious nature. The consultant advised against the use of the antitoxin and assured the patient that he fully expected that he would be all right in a few days. Sunday morning the patient's condition was quite alarming. He had the peculiar pallor of the skin with the blue lips so characteristic of diphtheria. The temperature was 101° F. and he was still expectorating blood-stained fibrinous membrane. The pain in his throat was worse and the breathing of a strident character. Mr. X. now consented to the use of the antitoxin, and at 1 p. m. 5,000 units were injected.

Sunday afternoon the report on the culture came back positive and the patient, being in an extremely serious condition, I administered 10,000 more units of antitoxin. He became rapidly worse until 11 o'clock Sunday night, at which time a slight improvement was noticeable, and this improvement kept up till the temperature reached normal the following Wednesday.

I wish to mention a few conclusions that I feel justified in drawing from this case: 1—Laryngeal diphtheria may occur in the adult. 2—That it may occur without any initial infection of the tonsils, pharynx or upper air passages, i. e., the infection may be a primary one of the larynx, possibly engrafted upon a simple catarrhal laryngitis. 3—That the diagnosis of laryngeal diphtheria cannot be made positively except when a satisfactory view of the larynx can be obtained, which is not always possible. 4—There should be an universal rule established in the profession as to the preventative use of antitoxin in these cases regardless of any difference of opinion as to the diagnosis. This rule would prevent a loss of time in administering this most valuable curative agent. 5—The general public should be taught the harmlessness of diphtheria antitoxin, even in the absence of diphtheria.

It is a constant surprise to me to note the prejudice that has to be overcome in using antitoxin even after all the years that it has been the one successful form of treatment for this otherwise extremely fatal disease.

How to Interpret a Case as Pregnant or Nonpregnant.

Jellinghaus and Losee give these rules:

1. Placenta and serum giving a negative ninhydrin reaction, when its control with inactivated serum and placenta also gives a negative ninhydrin reaction, is considered nonpregnant.

2. Placenta and serum giving a positive ninhydrin reaction when its control with inactivated serum and plancenta gives a positive ninhydrin reaction of the same intensity, is still considered nonpregnant.

4. Placenta and serum giving a positive ninhydrin reaction, when its control with inactivated serum and placenta gives a negative ninhydrin reaction, is considered pregnant.

5. Placenta and serum giving a positive ninhydrin reaction, when the control with inactivated serum and placenta gives a positive ninhydrin reaction, but of a distinctly lighter shade than the placenta and serum, is still considered pregnant.—(*Am. J. of Obst.*, April, 1914.)

EDITORIAL SIDELIGHTS ON THE EUROPEAN SITUATION.

The onward sweep of the German army, which has excited the admiration of all men, despite their nationality or sympathy, is due to system. The marvelous system of the German organization is the result of years of careful study and intelligent planning. The Teutonic mind is a complex organism and is capable of arranging those minute details that would escape the attention or unduly try the patience of any other nation. Consequently the German General Staff, beginning with small things, laboriously and conscientiously erected piece by piece a structure which, when completed, resolved itself into a perfect war machine. Nothing was overlooked and its completeness has been attested by the almost constant success which has attended the German arms in the face of overwhelming odds.

It requires more than guns and ammunition to produce an army—men are the real factor. The German army is the best trained of any similar body in the world, but its success has been due to something more than training. The fine physical condition of the German soldiers is largely responsible for their remarkable progress. Every soldier was in perfect shape before being sent to the front.

We had a good opportunity to see the care exercised in this connection while observing the movements of troops in Frankfort, Mainz and Cologne at the commencement of the war, and never have we seen finer examples of manhood. Each man was in the pink of condition and the surgeons watched the men as a mother does a child. In conversation with German medical officers, we were told that at sick call each morning at the front every man not up to standard is immediately sent to a field hospital for observation. If any illness develops which would incapacitate him for a week or more, he is sent to a base hospital in some large German city. In this way he is restored to health at the earliest possible moment and after a few weeks of light duty is ready to return to the firing line.

All of the ambulatory wounded are at once sent to their homes, where, attended by army surgeons and surrounded by their loved ones, they recover far more quickly than when interned in hospitals. Germany takes the best care of her wounded, as seasoned soldiers are always needed at the front. They have received their baptism by fire and are steadier than those who are not familiar with the singing of bullets and the hiss of shells.

The work of the surgeons on the field is far different from that in the well ordered hospitals, but they are doing splendid work. It is hardly to be wondered at when we recall that among the active consulting surgeons with the German army are Privy Councillor Professor Dr. Küttner, Director of the Surgical University Clinic, Breslau; Privy Councillor Professor Dr. Friedrich, Director of the Surgical University Clinic in Königsberg; Professor Dr. Pels-Leuden, Director of the Surgical University Clinic, Greifswald; Privy Councillor Dr. Tilmann, Professor of Surgery at the Academy for Practical Medicine, Cologne; Privy Councillor Professor Dr. Hildebrand, Director of the Surgical Clinic of the Charité, Berlin, and Medical Councillor Dr. Puppe, of Königsburg.

Dr. Carl J. Herzog, of Hoechst-on-Main, has been good enough to send us the translation of a report by Chief Surgeon Dr. Franz, which appears in the current issue of the *Berlin Klinischer Wochenschrift*, on

surgery in the field. He observes that as soon as a battle is imminent the surgeon directs his attention to his hypodermic syringes, which are usually the Pravaz type, with leather or asbestos plungers. Two syringes must be in order, one for morphin and the other tor camphorated oil.

The surgeon carries two bottles, holding 50 Cc., one of a 3 per cent. morphin solution and the second a 10 per cent. solution of the oil. Each Cc. of the morphin solution contains the maximum dose accorded by the German pharmacopœia.

The surgeon knows that the chief of the Sanitary Corps will see that such important items as candles and lamps, as well as all necessary medical and surgical paraphernalia will be at hand.

German army surgeons have found in determining the amount of splints and dressings to have on hand that this rule holds good: if one division is engaged, with a loss of 10 per cent., they will need the dressings and equipment of one field hospital. If the casualties amount to 20 per cent., they will need two field hospitals, and so on in proportion.

Dr. Franz's experience has taught him that despite the time and skill necessary the plaster of Paris dressing is the ideal form. The starch gauze dressing fails to meet the requirements, as it does not dry readily and in order to have the wounded transported with the least shock the dressings must be fixed immediately after they are put on. Even the plaster of Paris dressing is useless in rain and snow, so the "flying sanitary column" and the sanitary officers accompanying troops carry a bountiful supply of dry dressings and splints and these are used on the firing line. Dr. Franz recommends splints made of cardboard or wire, cut in pieces from 5 to 7.5 Cm. in breadth. For the "upholstery" of the splint, parts of the soldier's uniform are utilized, as it is impossible to carry sufficient absorbent cotton for this purpose. On the battle line the lack of water makes it impossible to use plaster of Paris. Before the dry dressings are used the splints are fixed by three cornered cloths, as this procedure saves bandages.

Franz believes plaster of Paris should be used in conjunction with starch dressings, especially in bandaging the thigh. He uses four plaster and six starch bandages, the latter being applied as spica coxae. For the knee and lower leg he employs two of each.

When a bone has been pierced and the injured man is removed to a base hospital, infected wounds are treated with window dressings and non-infected with extension dressings. The remainder of Franz's article tells of the variety of wounds.

Dr. Herzog also gives us the resume of an article appearing in the *Munchener medicinische Wochenschrift* dealing with observation of the wounded taken to Munich hospitals. Most of the wounds were moderate in extent and in the upper extremities. They were in good condition when received in the hospital. Even wounds associated with fractures of the humerus, ulna and radius, in which the bones were shattered showed no infection, due to the careful surgical work on the firing line. The majority of the injuries were caused by French rifle bullets, but the *x*-ray showed that the splintering was not extensive. A remarkable feature was the comparatively small displacement of the fractured ends, a tribute to the skill of the surgeons in the field. Many of the injured had been given first aid by their comrades on the battle line by means of the verbandpäckeben, which is part of every soldier's equipment.

The medical officers at the front by their great ability and conscientious efforts have saved the lives of a vast number of men who were desperately wounded.

That our medical confreres in Europe do not hesitate to sacrifice their lives on the altar of duty is clearly demonstrated by the large number of casualties in the ranks of the German army medical corps, as published in the official reports of the German losses. Within the first six weeks, 25 surgeons fell. There has been considerable mortality among French and English surgeons also.

Under what trying conditions the field surgeons are forced to work is best demonstrated by an extract from a private letter just received from a German officer: "During the German advance toward Paris, after a battle, a large number of wounded were collected and throughout an entire night were transported from the battlefield to the cathedral in Autremont. There the distinguished Prof. Rehn of Frankfort attended the poor sufferers, using as his operating table the high altar while three other surgeons contented themselves with ordinary tables or benches. With flickering candles to illuminate their operative field all that night and throughout the next day, these brave surgeons attended an unceasing line of wounded, scarcely stopping to refresh themselves. Thus are these surgeons living up to the high ideals of their profession, carrying on their humane work with friend and foe alike."

As brave hearts beat in the bodies of the army surgeons as in any other soldiers. Their work is not as spectacular and they do not receive the decorations as freely as do the line officers, but their work commends them to the highest praise and when the medical history of the great conflict is written, these men will be shown to be heroes indeed.—H. S. B.

Bacillary Consumption.

To the Editor of the MEDICAL TIMES:

I read your comments on my reply in your October issue with a great deal of interest, but fear that my failure to make my position on the nature of the bacillary cause of consumption sufficiently clear, led you to draw erroneous deductions from it. This I shall endeavor to correct in what follows.

A great deal if not all your misinterpretation of my conception of the real relation of the tubercle bacillus as a cause of consumption is due to the fact that in quoting my statement that I "regard the tubercle bacillus as a primary cause of tuberculosis" you omitted to quote the qualifying adjunct of the same sentence: "in its legitimate sphere." This would have left no doubt as to my status on this question.

The legitimate sphere of the tubercle bacillus, according to my opinion, is well defined in the same sentence when I say that experimental evidence clearly shows that the bacillus is capable of calling forth the disease when it is inoculated or injected into lower animals. This is far from alleging, however, that the disease as we meet it in the human family is brought about in the same way. It merely shows that "the disease may be artificially transplanted by inoculation or injection into lower animals after it has been called into being by other causes"—a process which finds a fitting counterpart in grafting, as I fully explain in the context.

I can hardly agree with you that this part of the problem is an academic one, but believe that the lack of distinguishing between the natural mode in which consumption is caused, and its artificial transplantation into animals after it has been so caused in the human sub-

ject, lies at the root of all the misconceptions which are extant on the practical side of this question at the present time.

This viewpoint also has a most important bearing on the distinction which must be made between those diseases which are caused by infection, and those which are of constitutional origin. It is entirely aside of the question to maintain that the tubercle bacillus is the cause of consumption, and at the same time predicate that in treating this disease efforts to build up the body-constitution are just as essential, perhaps more so, than those which are calculated to destroy, or counteract, the activity and inroads of the infecting agent.

If the bacillus is the unquestionable cause of this disease, why not be loyal to the text; why endeavor to straddle two horses that go in opposite directions? Why not follow a consistent line of action and lay hold of the so-called vigorous methods which are intended to exterminate the germ? Why, if it is an infectious disease, make an exception in the case of consumption, and manage it on a principle entirely different from that which is pursued in treating other infectious diseases? Is it the first essential, or even necessary to enhance the constitutional power in order to bring about a cure in malaria, syphilis, diphtheria and other well known germ or infectious diseases? By no means. In such instances therapeutic forces like drugs and antitoxin are administered which destroy or neutralize the power of the underlying poison, and this is done without paying the least attention to the constitutional disturbance. The latter is entirely secondary to the infection, and will speedily subside with all its accompaniments after the primary cause is subdued. This line of demarcation between the two conditions is drawn as definitely as that which differentiates day from night.

The same principle holds true when we view the cause of consumption from a preventive standpoint. There is no practical proof to show that a weak constitution is more liable to be attacked by an infectious disease than a strong or a vigorous one. Does this hold true of smallpox? Does the poison of syphilis or gonorrhea require any special local or constitutional depression before becoming infectious? Is there any testimony that the germs of diphtheria, malaria or typhoid fever have any selective affinity for the weak and debilitated when they are in search of victims? If there is they leave their tracks securely covered on the surface.

In the early history of this movement the weakened constitution theory was entirely lost sight of. To the men who inaugurated it the tubercle bacillus was the only cause of consumption, and to them was a specific conception. They reduced it to mathematical precision. They averred that every consumptive expectorated three billions of tubercle bacilli in a day, and that no person, whether feeble or strong, was exempt from the fatal moment when he might inhale the omnipresent germ, and fall a victim to this disease. To them there was no auxiliary cause, for the principal adherents of this theory declared that even heredity was no longer to be regarded as playing any part in developing this malady. The all-prevailing cry then was "destroy the bacillus and consumption will be annihilated in less than twenty-five years." This course is entirely consistent, which cannot be said of the later innovation. The real truth is that the idea that an impaired constitution exercises a conspicuous part in the production of consumption is an eleventh hour confession, compelled by an overwhelming array of practical evidence which rendered the position wholly untenable. Not the least among which is the recent development that, notwithstanding the rosy promises that have been doled out to the public, the so-called prevention machinery that has been put in operation, the almost superhuman efforts that have been expended, and the millions of money that have been exploited during the last ten or fifteen years, the disease is increasing while the death-rate from general diseases is decreasing, and that on the whole the consumption problem is aggravated instead of being improved.

In conclusion I would say that pulmonary consumption is a disease with widely ramifying causes, and agree with you that among these poor hygiene and poverty play the leading rôle, but on the other hand there are many other contributing conditions which cannot be touched upon here, and after a long and persistent study of this subject I feel constrained to say that so long as we are helpless in divesting ourselves of the horrible delusion that the tubercle bacillus plays any active part in the primary propagation of this disease as we find it in practical life, just that long will all our efforts to extinguish it be wholly barren and vain-glorious.

THOMAS J. MAYS, M. D.
1829 Spruce Street, Philadelphia.

Note.—We are indebted to Dr. Mays for his reply, but it seems to us that he has not given us anything better than, or at least as good as, that which he has derided and denounced, so far as a theory accounting reasonably well for things is concerned. He gives us a new plan of campaign which is clear, definite, most inspiring and based upon principles which to *us* mean the conservation and enhancement of health and the abolition of the infective agent itself—in other words good hygiene and sanitation. Dr. Mays agrees that poor hygiene and poverty play the leading rôles, *but he does not tell us how.* If we understand him it is not because they break down resisting power. Very well, then; if it is not by a lowering of resistance, let Dr. Mays state explicitly *how* they operate. Our theory is wrong, according to Dr. Mays. What is the correct theory, stated as briefly and as free from elements of confusion or mysticism as our own allegedly faulty one? —EDITOR.

Atrocious Names.

State Architect Pilcher is to be felicitated upon his suggestion that all such titles as "Home for the Aged," "poor house," "alms house," etc., be dropped. Along with these offensive titles should go "Home for Consumptives." Nor should such sentimental designations as "Sunset," for a place in which elderly people are the guests of the State, be tolerated, since it suggests approaching demise. We have heard of a place in a neighboring State where children are cared for whose parents are serving prison terms. The title has slipped our mind, but it is clearly indicative of the cold facts—Home for Children of Convicts—or something like that.

It is odd that in this allegedly enlightened age such names should be employed. Good taste and every other consideration cry out against them.

One of the best suggestions of this sort that we have recently noted is that the Department of Public Charities be called the Department of Public Welfare.

Acute Gastritis.

For the nausea and acidity in acute gastritis:

Spt. Amygdalæ Amaræ	℥ij
Resorcinolis	gr. x
Lac. Magnesiæ	ad. ℥ij

—NILES.

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NEW YORK, NOVEMBER, 1914.

The New Quarantine Laboratory.

On Saturday, October 10, the new laboratory at the Quarantine grounds on Staten Island was inspected by a large delegation of medical men from Manhattan, Brooklyn and other nearby points. The present equipment represents the last word in the scientific study of quarantinable diseases at our largest port of immigration entry, and reflects the highest credit upon the men who have secured it for the Empire State—the Health Officer of the Port, Dr. Joseph J. O'Connell, and the Advisory Board chosen by him as coadjutors. Especially to be noted is the fact that along with this achievement has gone a remarkable reduction in the running expenses of the entire plant. No other department of the State's government can boast of more consummate administration within the financial means apportioned. The profession should take especial pride in such executive triumphs upon the part of one of its members, for to-day the esteem in which it is held depends largely upon efficient executives charged with the great responsibilities of modern preventive medicine. Despite the menace of disease at our great port it is only now that really efficient protection has been afforded us, thanks to the zeal and labors of the Health Officer, and in order that his further plans may be consummated —every one of them imperative—the State should expend at least two million dollars, else we shall not be in a position to meet the increased burdens of the near future when, according to Professor Jenks, of New York University, the close of the European war will see an enormous increase in immigration, since the thinking middle classes of Europe, as well as those belonging to the lower strata of foreign society, will wish to flee grossly unstable political environments for the peaceful calm and economic advantages of our great republic. It is the policy of the Empire State to take care of its own Quarantine problems, for reasons that ought to be obvious to every New Yorker. This being so, and with the present high order of administration, the medical profession and all other disinterested citizens should make it their business to see that proper financial support is given to the port guardian. Nothing whatever is now involved save the health of the people and the highest type of scientific and administration efficiency, nor can anything else ever figure again in our Quarantine annals.

The Fleshly School of Psychanalysts.

Many of the papers on Freudian psychoanalysis now appearing in the medical press are thoroughly disgusting. The psychology of vulgar people bred in the slums of Europe is of no interest to American gentlemen. We are men before we are physicians, and we are gentlemen before we are psychanalysts. Of what possible use to decent people are the things now being published in some of the journals? If it is necessary that such matter be published, for the benefit of the benighted creatures who may need physicians versed in their peculiar traits, then let it be published in third-rate special journals which such medical men can read to their hearts' content, but let us keep these papers out of the leading periodicals. There are many excellent papers appearing on Freudian topics which should have a place in the best journals, written by gentlemen and scholars who go far deeper into sexual psychology than the disgusting school of scribblers. Our remarks are directed against the writers who report in nauseating detail the degenerate fancies and practices of foreigners of low social scale. These men are insidiously introducing sexual concepts that have absolutely no relation to the lives and thoughts of American girls and boys. We deny with vigor, and we repel with disgust, offensive assertions that would seek to identify the sexual psychology of clean, wholesome, well-bred American children with that of the types discussed in the class of papers under discussion. It is one thing to say that our young people have very active psychosexual experiences of a normal kind; they do, and these experiences are probably just as active as Freud himself claims them to be—but it is another thing to insist that our young people are nasty, vicious, perverted and inverted creatures, obsessed by degenerate fancies. The effrontery of the men who are advertising themselves at the expense of American childhood ought to be resented in no uncertain way.

You can't make a sow's ear out of a silk purse.

Hard Knocks for the Eugenists.

Bateson thinks that most of the schemes of the practical eugenists are "devised without regard to the needs either of individuals or of a modern State." He cites Beethoven as having come of "bad" stock. His mother was tuberculous and his father was a drunkard. "I doubt," he remarks, "if timid respectability will make a nation happy, and I am sure that qualities of a different sort are needed if it is to compete with more vigorous and more varied communities." Since we know so little about the laws of heredity we have no business to establish a government matrimonial bureau. The feebleminded must be controlled and mental defectives should not intermarry. We can go no further than this without the most careful, thorough and systematic research. This is refreshing indeed, coming from the leading authority of the present day

The Nervous and Mental Patient in the General Ward.

Once more we advert to our old plea for privacy in behalf of certain nervous patients in general hospitals, particularly attempted suicide cases. The state of mind of these discouraged and sensitive souls ought to receive special consideration. Other patients, nurses and attendants are not always as thoughtful as they might be or as less arduous duties might permit them to be. To be the cynosure of curious and cynical eyes in such circumstances is trying and not conducive to mental restoration. We are well aware that these matters are considered in the light of niceties which most general hospitals are not in a position to take up. It is even possible that some matter of fact people may think that our point is of no great moment and the cases concerned but few. It is true that general hospitals cannot always have everything they need. How many hospitals are equipped to deal with the acute insanities; how many are prepared to segregate children upon admittance until they are beyond the incubation periods of the infectious diseases and can safely be placed in the wards; how many have facilities for the treatment of venereal patients; how many can handle contagious disease properly when it does develop? So it is not strange that the attempted suicide goes in with the typhoids and fractures. This is only the year of grace 1914, and our civilization (?) halts and is not yet come to its maturity.

The Physical Examination of Industrial Workers.

The data accumulated by various agencies engaged in the physical examination of industrial workers and others possess a certain pathetic interest. Eight hundred garment trade workers in New York showed 62 per cent. in need of medical treatment. In a New York City bank 100 per cent. of the employees were found to be abnormal. In a German investigation fifteen diseases or conditions of impairment were found among every ten workers examined. We say that these data possess a pathetic interest, for how much can be done to remedy matters? The ostensible object of these examinations is the conservation of efficiency, and we admit that a reduction in morbidity is attainable, but you cannot go very far as long as conditions continue essentially as they are. We already know that the conditions under which many people work are not worthy of a highly civilized society. If the statistics disclosed by the investigators will help in any way to reform our crimes against sanitation and hygiene, well and good; otherwise we can see in these physical examinations only a means of insuring healthy recruits to be later broken down and the industrial fires refed with fresh fuel. We seem nowadays to have a positive genius for dodging fundamental housecleaning. Amelioration seems to be the limit of our powers. Is this inevitable and in the nature of things or is there something the matter with our thinkers and men of action?

Evolution and Genius.

Professor William Bateson, the eminent English scientist, asserted in his recent address before the British Association at Melbourne, Australia, that evolution may be, not from simple to complex, but from complex to simple, and that natural selection fails fully to account for diversity of species. Instead of assuming additions from without, Bateson pictures the possible course of evolution as an unpacking of an original complex which contained within itself the whole range of diversity which living things present. He goes so far as to say that Shakespeare once existed as a speck of protoplasm not so big as a small pin's head, and that to this nothing was added that would not equally well have served to build up a baboon or a rat. In short, in normal beings, underlying powers and faculties are controlled, masked or suppressed by forces which in the exceptional man, in other words the genius, are lost for some reason or others. Instead of thinking of the powers of the gifted as something added, we must think of them as releases of powers normally suppressed.

This new tack ought to please the theologians immensely, but we have yet to account more fully for the variation known as genius, for it cannot be explained how the normal controlling forces are modified in such a case. How did Carlyle come to differ so radically from his peasant ancestry? Who can ever say? The great juggler Nature is as inscrutable as ever, despite the ingenious Batesons.

The Dog-muzzling Ordinance.

The muzzling ordinance of the Board of Health is being put in force and many arrests have already taken place. In England this regulation is said to have eliminated rabies, and whatever our feeling about the humaneness of it we will have to observe the law. A writer in the lay press reminds us that we have grown accustomed to the bitting of horses, actually a more uncomfortable device than muzzling. It is really a necessity that our many dogs should be muzzled, for the number of people bitten by sick animals is appalling. As to the total elimination of dogs from the environs of the city, for good sanitary reasons, that consummation, devoutly wished for by many good people, would appear to be a long way off, if indeed it can ever be effected.

War and Disease.

Despite the excellence of the medical departments of the warring nations, a certain amount of infectious disease is inevitable, and it is being reported that dysentery, typhoid, typhus and cholera have already been noted in the European forces. The Turkish army vaccinates against both typhoid and cholera, which we believe is more than can be said of England's or Germany's forces. Antityphoid inoculation is compulsory in the French army. It is strange that the British War Office is so backward, in view of the South African experiences with typhoid—over fifty thousand cases. With the value of typhoid inoculation thoroughly established, we can only conclude that the medical department has not as yet been permitted to functionate fully by those in military control. It will be strange if the British record in this war will compare unfavorably with that of the Japanese in the Russo-Japanese war. In that war there were ten sick to forty wounded, something never before known.

One of the Good Sides of the War.

It is said that the prohibition of traffic in vodka by the Czar has already resulted in improved conditions that are little short of incredible. It is said that the government will probably continue the prohibition after the war is over. Southern Russia is hardly recognizable, if we can believe the reports; the towns are orderly, and the people are substituting wholesome amusements for debauchery. The average Russian peasant, before the war, spent about 55 per cent. of his earnings on vodka. It is thought that this reform will greatly affect social and economic conditions, and consequently political agitation of the sort which we associate with the Russian people.

Medical Editorial Table

A National Standard Requirement for Medical Practice.

Lieut. Col. J. R. Kean, U. S. A., makes a practical suggestion toward the establishment of a national examining board. The Secretary of War, he reminds us, is authorized to issue commissions as first lieutenants in the Medical Reserve Corps to graduates of reputable schools who pass an examination to be prescribed by the Secretary. No limit is placed on the number of reserve officers. If, therefore, the President of the United States should appoint a board for the examination of officers for the Medical Reserve Corps, of a composition which would insure a high standard of requirement, and the state boards would agree to recognize without examination the holders of Reserve Corps commissions—as the states named above already recognize medical officers of the government services—the thing would be accomplished. If the laws of any state do not at present permit such recognition it would not be difficult to obtain the necessary legislation. It would not be necessary to wait for favorable action by every state, for if the scheme were to be begun by even a few states, the rest could be expected to come into line as the desirability of the scheme became evident. It would obviously be desirable that the other medical services of the national government should join with the United States Army in a plan of such importance to the profession at large. The successful candidate would then have the qualification for a commission in the Medical Department of the Army, the Navy, or the Public Health Service, as well as a certificate of proficiency, "which would be the open sesame to the doors of state exclusiveness." Such a board would not seek to examine a very large proportion of the recruits to the ranks of the profession or supersede, in any way, the state boards.—(*J. A. M. A.*, Sept. 12, 1914.)

The Speeding Ambulance.

The speeding ambulance, with its clanging gong, is a barbarism, a sensational, though perhaps unconscious, play to the galleries, quite foreign to the spirit of the profession. Few surgical emergencies, in which there is any possibility of help from anyone not on the scene, require such breakneck haste. Few sick patients really suffer from delay of transportation; few would not be better for being moved more slowly and gently. Moreover, the rights and safety of the greater number should be regarded. Laws against overspeeding are rigorously and rightly enforced against physicians in the regular discharge of their duties; they should be equally enforced against ambulances. The ambulance is not a fire-engine and should not be suffered to behave as such. —(*Boston Med. and Surg. Jour.*, Sept. 17, 1914.)

The Dumdum Myth.

The spitz bullet was recently introduced by Germany and adopted by several other armies, that of Great Britain and the United States among them. This bullet is quite short, of conical shape, and tapers so gradually that the center of gravity is thrown back near the base; consequently, in spite of its great initial velocity and flat projectory, it has a tendency to turn sideways upon meeting any obstacle, although it will go through the soft parts making a small clean-cut channel, and do little or no injury unless it hits a vital organ. We prophesied in May that there would be a return to inhumanity in the next war because of the use of the spitz bullet. La Garde says that the least resistance upsets it and in turning at great velocity the wounds it inflicts are very much lacerated and otherwise attended with destructive effects which are not unlike the wounds inflicted by dumdum bullets. That the armies of any of the nations now at war are using the dumdum is altogether improbable. Spitz-bullet wounds have been mistaken for the explosive lesions of the dumdum bullets. Civilian hunters in East Prussia, and probably in France, use dumdums, and doubtless soldiers have been injured by them, but not by regular troops. The troops have no occasion to use the dumdum, because the spitz is almost as destructive and its employment just as brutal.—(*Medical Record*, Sept. 19, 1914.)

The Great War.

One beneficent result of the war will be that we will be spared for some time the boredom of listening to doctors recently returned from Europe who tell us about the professors who were so kind that they turned their whole clinics over to them twice a week. The hundreds of medical men, who go abroad every year to get a veneer that passes muster in villages but is of small account in our larger cities, will have to content themselves with reading English. They will also be compelled to visit American clinics. The dearth of synthetic drugs will compel them to read English works on materia medica and the Dispensatory.

The dependence of American medicine on Continental ideas has always put us in a ridiculous light with other English-speaking peoples, and in no other country but ours can one see the transplanting of these ideas without the slightest effort to change them to fit the trend of national thought and characteristics. We graft them in the most audacious manner. Of course, an interdependence of thought throughout the world must obtain, otherwise there would be no progress, but this should never deteriorate, as it has with us in medicine, into a dependence that is almost a vassalage. Now that the opportunity presents itself, is this not the moment to break the chain?—(*Interstate Med. Jour.*, Sept., 1914.)

The Teeth of an Army.

In discussing the teeth of an army, we are not indulging in any martial figure of speech; we are simply recalling the very literal sufferings of the English soldiers in the South African campaign from lack of attention to their teeth, as noted in the *British Medical Journal* for August 22, 1914. That journal observes editorially that, complying with a suggestion of the British Dental Association, the director general of the army medical service has gratefully accepted the services of many volunteer dentists to put the dentures of recruits in order. This action will restore to the list of acceptable recruits many who would otherwise have been rejected. It is hoped now to arrange for dentists to be attached to base hospitals and hospital ships, both in England and abroad. Men in uniform, reservists, and would-be recruits are admitted for free treatment, either by extraction or filling, to the National Dental Hospital in London, where a volunteer corps of dental surgeons and students is at work. It has been considered advisable not to worry the war office for help just yet, as a public spirited benefactor has supplied funds for fillings, and the dental volunteers supply their own hand instruments and engines. As our contemporary remarks, since an army travels on its stomach, it seems well that this organ should be protected by good teeth.—(*New York Med. Jour.*, Sept. 12, 1914.)

Miscellany

CONDUCTED BY ARTHUR C. JACOBSON, M. D.

THE IMMENSITY OF OUR JOB.

Did you ever consider the immensity of the job of a general practitioner of medicine and how much is expected of him? I have been treating a patient with consumption of the lungs during the last three months. Of course he expected that I would at least keep him comfortable, and I did for a while. He felt so much better under my treatment that he believed I would cure him—but, alas! These cases in my experience are never cured. They get a few days of comfort, then relapse, hang on for a few months, then die; and when I consider the hopelessness of these cases and think of the multitude of so-called remedies (and cures) the immensity of the job alarms me. Consider the multitude of *serums* on the market, emulsions, oils and germicides, and the stacks of literature that you are expected to wade through, analyze and utilize, in order to do what? Watch a patient die? Advanced tuberculosis of the lungs defies every effort put forth to check it. If Solomon had lived to this good day and had kept up his former gait, he would have some excuse for his cry of "Vanity and Vexation of Spirit." When you read the advertisements in your journals, and witness the so-called cures, and the editors tell you that to be up to date you must be familiar with all the appliances in your field of work and that your office should contain everything known to modern science, it is appalling. How are you going to do it? It would take half a life time to become familiar with only one line of treatment. As to *serums*, how many general practitioners know anything of the preparation and administration of serums? They can empty an already filled syringe into the tissues of the patient, but suppose you ask one to refill the syringe—how long would it take him to do it? The patient asks the doctor: "What is that you are pumping into me?" He replies: "Tuberculin." "How is it made?" Answer: "From the germs of consumption?" "What are you giving it for?" Answer: "To see if you have consumption." "You pump consumption germs into me to find out whether I have it or not?" "Yes." How does that sound? Is there anything immense about that? Yes. What is it? Gall and Graft.

I want to tell you something. This affair is overgrown. There cannot posibly be any use for one-tenth of the paraphernalia used in the practice of medicine to-day. Only a few foods are necessary to supply natural wants. Milk alone for the first year's nutrition, a few cereals and milk and but little else for the second year. Whole nations subsist mainly on rice and fish, and a dozen simple aliments will suffice for a normal individual. Then why the many remedies to rectify departures from normality? Surely a million different agents are unnecessary. Of course the manufacturer and his employees get something out of it, but the patient, the man who really needs help, can only be injured by filling his system with the vile compounds. Efforts should be made to simplify instead of mystify, to heal instead of destroy. I am not a Solomon, but I can see that the supply of remedies greatly exceeds (not the demand but) the need. The immensity is entirely too immense.

W. P. HOWLE, M. D.

Charleston, Mo.

Yes, we have all felt at times just as the doctor expresses himself. Most of us have not been so frank as Dr. Howle, however, and have kept our feelings more or less concealed. Recently we encountered this direct question, asked by another frank colleague: "When Gabriel blows his trump will we still be treating victims of tuberculosis under ridiculous economic conditions and coolly watching, like an association of ghouls, the destruction of our brothers?" Now that, we think, more nearly expresses what is in Dr. Howle's mind. We were disappointed not to find in Dr. Howle's paper anything further than confession of therapeutic impotence in the face of the immense problem presented by advanced tuberculosis. Of course we fail therapeutically in such cases, and in too many of the incipient and moderately advanced. But suppose we do succeed, do not the victims return to the same social and economic planes? What is the good of "curing" a cigar maker if he goes back to that industry after recovery? The point is, people have no business to contract tuberculosis in the first instance, or at least they have no right to become clinical cases, for according to modern teaching we all have a little tuberculosis. Poverty, industrial slavery and alcoholism are chiefly responsible for tuberculosis. After they have done their work we, the medical profession, have the results dumped upon us in the shape of Dr. Howle's incurable consumptives. Isn't it about time that this gruesome game stopped, with us as the goats not less than the miserable victims? Dr. Howle seems to think that there is nothing we can do. We cannot do anything worth talking about therapeutically for the advanced turberculous patient, but we who understand *why* the consumptive *is* certainly have a duty to perform. We shall not always be so impotent as might be imagined, either. Medical economics is a new thing. Tinker less with the symptoms of the advanced consumptive and turn your eyes in the direction of the factory. Leave the bedside and look the tenement over in which the victim resides. Figure out the relationship that exists between the fact that the president of the charity organization society in your town is also president of a street railroad directly interested in crowding as many people as possible into certain city blocks; then figure out a further relationship of these things to the subject under consideration. Turn from the microscope to a study of the land question.

To continue to tinker with the advanced consumptive and to do nothing else except look forward to a specific treatment is nothing less than a crime in these progressive days. The case of the advanced consumptive of to-day is hopeless, but we can work with zeal and faith for the realization of a social order that will no longer see nor permit the brutal and disgraceful conditions that produce the sad spectacle of tuberculosis.

Asylums for the hopelessly sane are whimsically advocated by a writer in a recent number of the *Atlantic Monthly*. He outlines the methods that should be applied in such sanitariums. "Patients not too far advanced in their malady would have a good time. They would be constrained to devote themselves recklessly to whatever they held most dear (provided the causes were approved worthy); they would be made to take risks, commit imprudences. By some ingenious arrangement of the daily curriculum, they would be constantly given the choice between that which is spontaneous, vital, and that which is reasonable; and, when they chose the latter, they would be hissed. A fine place, such a sanitarium! Stimulating, inspiring, invigorating. . . . It is a desperate business, this life, to which we are so obscurely, so inexplicably com-

mitted. Our only chance with it is to take it desperately. It is infinitely greater than we are, it knows what it is about, its cosmic intentions endure. We are wise when we let ourselves go with it; we are very silly when we weigh and reserve our allegiance. So, then, the sane are the only insane? That is possible."

H. Fielding-Hall, once the head of the largest prison in the world (Rangoon), doesn't think much of eugenics. Suppose the eugenists had their way, says he, and established a state, what would the inhabitants of that state be like in a few generations? They would be tall, broad, muscular, beautiful, delicate to a degree, useless save for athletic contests or beauty shows, always in the doctor's hands—eugenic doctor of course—brainless, incapable of affection, almost wanting in courage, and to a great extent sterile; and in the end, if the state did not die of inanition first, some more virile and intelligent race, say the Hottentots or Andamese, would come and eat its inhabitants. The Eugenic Utopia would end in the digestive apparatus of a savage. *Sic transit gloria Eugeniae.* Nothing could be more certain than that.

It will be noted that Mr. Fielding-Hall faithfully restates the findings in the case of highly bred animals. And so the outcome would be in humans, were it not for the fortunate fact that the would-be eugenic breeders' plans will always be effectually upset by the little blind god. So effectual is the domination of the god that it would not be possible to frame up a eugenic experiment. What would probably happen? Why the most glorious lady in the outfit might take a fancy to a bald-headed eugenic manager with a Lane's kink and migraine.

What's the use?

SELLING ONE'S SELF LITERALLY.

Mr. Venus of "Our Mutual Friend" is at last outdone. A gentleman has appeared who is engaged in cornering the skeleton market. He is a M. Seymore, of Tours, France, and his company is incorporated in New Rochelle with a capital of $750,000. M. Seymore speaks:

"I intend immediately to seek mortgages on the skeletons of prominent men and liens on the brains of the geniuses and wizards. When the mortgages are signed we will pay 10 per cent. of the value of the skeleton to the owner. While we will want a diversified collection we will accept only responsible persons, as we will have to keep track of their whereabouts during the remainder of their lives. When they die we will present our mortgages to the relatives. The factory for the preparation and polishing of the skeletons ought to be built and in operation within a year. Material at the beginning will be obtained from unidentified and unclaimed bodies which we hope to gather up. From statistics we have discovered that the skeletons of men between 18 and 30 years are worth $32 apiece; between 30 and 40, $17.60; between 40 and 45 years, $9.98, and more than 45 years, $3.42. So you see the advantage of offering an early mortgage. There will be four classes of skeletons—domestic, imported, miscellaneous and 'lost and found.' I have signed up for the brain of James J. Hill. We are to pay $2,500 for it. It was great work to get it so cheap."

The skeletons will be sold to medical colleges, etc., and the brains will be sent to Europe to be examined by brain specialists.

What next?

Under the new law relating to narcotics we are having some interesting experiences. For example, a physician recently wrote a prescription for Warburg's tincture and was mildly surprised when the pharmacist rang him up to say that he couldn't put it up without the name, age, address of the patient, and the date, etc. Upon inquiry, the physician was reminded that Warburg's tincture contained opium. Upon looking up the formula the physician found that Warburg's tincture contains four grains of powdered opium to the quart. Thus his patient would get one-sixty-fourth of a grain of opium in each dose of a teaspoonful, a four ounce prescription containing one-half grain of the drug. This is certainly screwing things down pretty fine and makes one smile a bit.

The quick movements which the combatants in modern battles must execute on the field, and the forced marches which they must make, make the matter of foot gear as important as any other factor of success. It is said that the Germans first in Belgium were in many cases not well shod, and we have no doubt that this contributed to their difficulties. In the army of the United States particular attention has been given to the matter of shoes. Flexible soled, soft toed shoes, with the inner borders straight, permitting full use of the great toe leverage, have been found to increase the soldier's efficiency remarkably. The torments of a bad shoe are sufficiently great in civil life. What must they be on long marches and in action?

A note in the *Medical Record* of September 12 tells us about a remarkable hospital in New Haven, Conn., for which ground has just been broken. No physician or surgeon will be eligible for election to the staff who has not demonstrated, by publication in the medical press or by some other actual work done, that he is capable of filling a staff position in an efficient manner. If he becomes a member of the staff he has to write an article for publication in the medical press at least once a year, describing some work which he has personally done or some discovery which he has made. Failure to do this automatically terminates his membership on the staff.

This reads like Bellamy's "Looking Backward." We should like to see something of the sort put in force in all other hospitals. It would certainly be tough on some of the visiting. But how and by whom is the value of the papers and discoveries to be gauged? If the contributions are rotten, are the perpetrators to retain their places on the staff? The mere fact that a man publishes something annually means little or nothing. The basic idea is all right, but it is hard to tell how well it will work out when applied. The scheme as outlined sounds as though it had been worked out by somebody like Ford, the automobile man. We like the intent, and believe that a good system could be worked out, but as stated certain drawbacks suggest themselves. Why wouldn't an elective system promise well, all reputable members of the regular profession in a given community participating in direct primary nominations and in the elections? Terms of medical service to be five years and surgical ten, so as to widen the opportunities of many good men? A live issue thus created would make greatly for professional ambition and equitable dealing, and substitute democracy and progress for aristocracy and stasis. As things are now, "few die and none resign," which is all very well for the selfish monopolists, but bad for medicine.

With cocain, novocain and quinin all the requirements of local anesthesia can be fulfilled.—Gwathmey's *Anesthesia.*

The American Association of Clinical Research

JAMES KRAUSS, M. D., Permanent Secretary and Editor.

The sixth annual meeting of this organization will be held in Baltimore, November 5, 6 and 7. The headquarters will be at the Hotel Emerson, the sessions at Loyola College and the clinics at the Maryland General, Beilder-Cellman and the Howard Kelly Hospitals. The program is as follows:

Nov. 5.

8-12 A. M.—Clinics. Maryland General Hospital.

2-6 P. M.—Session. Loyola College. 1. Call to Order. 2. Opening Address by the President. 3. Records and Reports of the Secretary and Treasurer. 4. Election of Officers. 5. New Business. 6. The Next Place of Meeting. 7. Committees: Research, Educational, Membership. 8. Energies in Atoms, E. Stillman Bailey, M. D., Chicago. 9. Radium Bromide vs. Mesothorium Bromide, Prichard von David, M. D., Boston. 10. Pulmonary Tuberculosis: Diathermia. Demonstration of Technique, Albert C. Geyser, M. D., New York.

8-10 P. M.—Public Session. Loyola College. 1. Address of Welcome, Mayor James H. Preston, Baltimore. 2. President's Address: "Why Your Eyes Never See the Truth," Leonard Keene Hirshberg, M. D., Baltimore. 3. What the Subconscious is Not, Prof. Knight Dunlap, Ph. D., Baltimore. 4. Therapeutic Methods, James Krauss, M. D., Boston.

Nov. 6.

8-12 A. M.—Clinics. Biedler-Sellman Hospital.

2-6 P. M.—Session. Loyola College. 1. Unfinished Business. 2. Colloidal Products: Ultramicroscopic Demonstrations, Herman Hille, Ph. D., Chicago. 3. Colloidal Silver in Acute Endocardial Diseases, J. Gutman, M. D., Brooklyn. 4. Heart Stimulants: Observations. Series III, F. C. Askenstedt, M. D., Louisville. 5. Arsenization: Yellow Fever and Asiatic Cholera, Reginald B. Leach, M. D., Paris, Tex. 6. Haematopoeisis, F. St. Clair Hitchcock, M. D., New York. 7. Uterine Fibroids: Roentgen Ray Treatment, Jefferson D. Gibson, M. D., Denver.

8-10 P. M.—Public Session. Loyola College. 1. Why Uplifters and Reformers are Deficient in Senses, Leonard Keene Hirshberg, M. D., Baltimore. 2. Do Fish Perceive Colors? Have Flounders a Color Sense? Prof. S. O. Most, Ph. D., Baltimore. 3. Animal Behavior in Man, Prof. John B. Watson, Ph. D., Baltimore. 4. Experimental Pharmacology, Edwin Lightner Nesbit, M. D., Bryn Mawr, Penn.

Nov. 7.

8-12 A. M.—Clinics. Howard Kelly Hospital.

2-6 P. M.—Session. Loyola College. 1. Unfinished Business. 2. Acidity; A Study of Cause and Effect, John Aulde, M. D., Philadelphia. 3. Medicinal Therapeutics, Daniel E. S. Coleman, M. D., New York. 4. Pressure Anaesthesia. Demonstrations, Dr. R. Kendrick Smith, Boston. 5. Neisserian Proctorrhoea, Bernard Asman, M. D., Louisville. 6. Subjective Symptoms in the Diagnosis of Rectal Diseases, F. H. Williams, M. D., Boston. 7. Psychanalysis: Its Methods and Value, Sheldon Leavitt, M. D., Chicago. 8. The Surgery of the Female Generative Organs, F. L. Newton, M. D., Boston.

8-12 P. M.—Banquet. Ball

The officers for 1914 are: President, Leonard Keene Hirshberg, M. D.; First Vice President, E. B. Smith, M. D. (deceased); Second Vice President, George W. Mackenzie, M. D.; Registrar, Jefferson D. Gibson, M. D.; Secretary, James Krauss, M. D.

Pancreatic Studies.

I. Fat necrosis. Attacks of abdominal localization, giving extreme fatigue, flatulence and depression. The urine contains no albumin or sugar. Recovery may take place, and subsequent attacks lead to coma, and death-chill or rigor, at the onset, is notable. Stockton and Williams (*Am. Jour. Med. Sci.*, September, 1895) report two cases. Great thirst accompanied by slight fever, and in one case jaundice was observed. Harley (*Jour. Path. and Bact.*, 1895, p. 245) studied a case of fatty stools in a boy. Only 26 per cent. of the fat of milk was digested, and about 60 per cent. of the nitrogen. Experiments on dogs, according to this writer, agree. But, strangely enough, the fat which is split up is split up within the intestines.

Hematogenous jaundice, in 1896, and its association with fat necrosis called forth Auld's assertion that jaundice cannot be caused by absorption of bile from the intestine. Kühne's theory was overthrown by Minkowski and Naunyn. The jaundice produced by toluyl-en-diamin, according to Stadelmann, Afanasiew and Hunter, is not hematogenous, but hepatogenous. The liver-cells become devoid of pigment, pale, and show fatty degeneration.

Cayley (*Brit. Med. Jour.*, July 4, 1897) reports studies on a case of fat necrosis. Acute pancreatitis was diagnosed, there were epigastric pains and constipation; later, vomiting, and on the fourth day death by collapse. At autopsy there was fat-necrosis in the abdomen and some sanguino-serous liquid in the peritoneal cavity. The pancreas was enlarged, the lobuli pale red, and the cells in a condition of coagulation-necrosis. Similar cases by Hovenden, Stanley, Allina and others lead Pepper and Stengel, in Gould's Year Book, 1898, to say that frequency may be much greater than we suspect. They complain that the obstinate constipation obscures the presence of fat and dark coloring matter which the stools and intestinal contents show when examined. Linossier has shown that the presence of hydrochloric acid in 1:1000 solution will destroy the potency of pancreatin in 20 seconds. Cases of suspected pancreatic disease must, therefore, be differentiated from hyperchlorhydria associated with intestinal reduction of alkalinity.

Simmons reports a case of fat-necrosis succeeding a gunshot wound of the pancreas. He gives two cases: in one, non-traumatic, there was pain over the epigastrium and marked meteorism. Brennecke gives two more cases, violent pain, vomiting obstipation and icterus, celiotomy performed revealed gangrene and fat-necrosis. Nothing was done, and the death of the patient occurred in a short time. The patient was in each instance an alcoholic. Manges reports a case in which, after laparotomy, the patient recovered.

Katz and Winkler give many experiments (51 dogs) in which tying the arteries and the subsequent hemorrhages produced fat-necrosis. A marked leucocytosis occurred during the life of the animal, which controls

show was not due to narcosis or to the abdominal section. In all these experiments the spleen was found atrophic. The fat-necrosis seemed due to the action of the fat-splitting ferment of the pancreas, and the hemorrhages as well as the cutting off of the blood supply are accelerating causes of the fat-necrosis. Williams, by experiments on cats, shows that the introduction of pancreatic tissue into subcutaneous adipose tissue produced in 50 per cent. of the tests typical fat-necrosis. Sata shows that bacteria can produce fat. Benda found, accidentally, that preparations of material from fat-necrosis cases, having been hardened in 10 per cent. formalin and placed in Weigert's neuroglia stain for 24 hours, look as if covered by verdigris. Section shows same appearance throughout.

D. L. Edsall, in 1901, studied the ethereal sulfates recoverable from urine. He regards the study of gastric secretion as highly important coincidently. This we have seen in Linossier's work in 1898; and, apparently, adds Edsall, the theory of Mueller (that fats may be split up in the presence of grave pancreatic disease, but not in the face of icterus) is relatively true. Steatorrhea, then, is of hepatic and not pancreatic insufficiency.

Kraus and Sommer have shown that in phosphorus poisoning there is a quantitative transference of fat from the distal body parts to the liver.

H. G. Wells states that fat-necrosis is a simple death of fat tissue characterized by a sharp delimitation of the area usually edged with leucocytes as in a wall and surrounded by connective tissue, later; while the cells become swollen with the products of fat-splitting. Each of these elements can be produced experimentally, but only the pancreatic secretion produced the total picture. Preparations of carica papaya irritate, but do not produce the typical changes of fat-necrosis.

Z. Mouye doubts the conclusions of Volhald, who thought that the gastric juice contains a fat-splitting ferment. Free acid and bacteria would account for any portion which might be modified.

Deaver and Mueller, in 1904, discussed the pathology and surgical treatment of diseases of the pancreas. Drainage of the gall-bladder will relieve many cases of chronic pancreatitis. It is not very easy to differentiate malignant pancreatic disease from chronic pancreatitis, before operation, so Deaver advises operation, section, even in presumably malignant cases. Frequently it will be necessary to open and drain the gall-bladder or to remove stones. Drainage of pancreatic cysts is most happy in outcome. Bunge details recovery in a case of acute hemorrhagic pancreatitis. Treatment was surgical. There was found extensive fat-necrosis (*Arch. f. klin. Chir.*, Bd., lxxi, Heft. 3).

Courvoisier says that pre-existing jaundice associated with a distended gall-bladder is due to cancer of the pancreas, and Moynihan, quoting this opinion in the *Practitioner*, says that but few exceptions may be stated. He and Deaver are at one in regard to the need of section and drainage for chronic pancreatitis.

II. Chronic Pancreatitis. This, as seen by the surgeon, says Moynihan, is always secondary, and due to infection.

Acute pancreatitis appears usually in some stout person giving a history of gall-stones, indigestion or alcohol. He is seized with sharp, sudden and agonizing pain in the epigastrium, followed by collapse as vomiting sets in. Pulse is rapid and thin, some elevation of temperature occurs and runs with an irregular line. Jaundice is frequent. There is no intestinal obstruction, flatus and feces passing naturally. Death may supervene in from 3 to 5 days. Chronic pancreatitis, on the contrary, may appear identical with cholangitis, Pain does not radiate, however, around and into the right shoulder, but towards the left. Jaundice comes on quickly, deepening much in each attack of pain; as a rule the jaundice in chronic pancreatitis is not absolute. In malignant disease the jaundice comes on slowly and insidiously, and progresses evenly, gradually and without remission.

Pancreatic disease, in general, presents fat-necrosis, hemorrhage, altered character of the stools, alteration in urine, and wasting. There is, also, glycosuria.

III. Surgical indications. The present status is such that surgical intervention is the only means of relief afforded once diagnosis becomes established. The use of calomel in hepatic disease has caused controversy. Its action in stimulating salivary secretion may be paralleled in pancreatic action. However, there is much to learn since we know something of the hormones flowing between the duodenal circulation and the pancreatic and spleenic blood-vascular currents.

IV. Intestinal Chemistry. We have problems involving the enterokinase, hormones and inversive, and reversive functions which will lead eventually to a better knowledge of pancreatic conditions. For the present it may be conceded that food products are exciting agencies and that a proteid molecule acts as a base, a lever, or a fulcrum upon which the transition from product to product issues. This proteid molecule, ferment enzyme or activator, as you will, must be elaborated in some gland or tissue. Disease may consist in the gland (pancreas) in the formation of imperfect molecules of these or in the inhibition of their formation. What the role of hormones may be remains to establish. Can we say that they form part of a chain, an endless chain, which carries fuel to the fire, bearing minute elements from the intestinal lumen to the glandular substance, and at times bearing with them parasites? In such a fashion would the repetition of enzymes or ferment bodies be accelerated, and equally so infection propagated. It seems more reasonable to account for infection by way of the blood stream than by way of the excretory ducts, for these latter are still always outside the body cavity, in reality and in biogenesis. The principle of surface-tension will enable us to see why entrance of a duct is less serious than penetration of a mucosa.

V. The importance of the pancreas in muscle nutrition should lead us to explain the apparent indolence of people or races subject to diabetes. May there not exist an instinct which directs the Jew away from manual labor? On the other hand, the restless and nervous activity of thin people may be secondary to and not causative of pancreatic derangements.

Idioms of Practice.

The physician will notice, with amusement, that some medical terms bear among the laity a modified or varied significance. "Gastritis" is used to carry the meaning of *gas* in the abdominal region. The physician will be told that "I suffer so much from gastritis; especially after I eat." Again, the word iritis is employed as if spelled eye-ritis, and meaning to the lay mind a pain or inflammation of the eye. Similar mistakes are made by adults and children frequently have weird ideas on medical subjects. The little Pepper children, who had the "squeezles" (wheezing and sneezing, with measles), and the grown-up bad boy who refers to blue-balls for buboes, are alike onomotopoetic and otocentric.

Diagnosis and Treatment

Enuresis and Chronic Digestive Disturbances.

F. Van Der Bogert believes that involuntary passage of urine is due either to increased irritability of the bladder or to diminished tone of the sphincter, influenced by increased excitability of the lumbar center or interference with normal brain control.

The belief then that the disturbances of digestive functions play an important role in the causation of enuresis other than through the production of changes in the urine is based upon the following facts brought out by study of his cases:

The symptom occurs at an age when gastro-intestinal disorders are most common, and productive of most nervous symptoms. The incontinence practically always occurred along with other functional nervous disorders, or with local digestive symptoms, or with a poorly nourished state and anemia.

He treated the gastro-intestinal condition, recommending:

A definite number of meals daily, given with absolute regularity to establish a regular digestive habit, and separated by an interval long enough to ensure complete digestion and the establishment of an appetite.

Absolute abstinence from food between meals, nothing but water being allowed.

A mixed diet containing green vegetables to stimulate peristalsis. The diet should be based upon the history of particular excesses and upon a study of the bowel movements to determine what particular food stuffs are at fault.

Proper and thorough mastication.

The establishment of good hygiene.

Medical treatment is practically limited to the temporary use of laxatives and intestinal antiseptics. After a normal digestion is established, some easily assimilable preparation of iron, and sedatives may be temporarily given early in the treatment to control the bladder. —(*N. Y. State Jour. of Med.*, December, 1913.)

Epilepsy in Childhood.

E. B. Smith, of London, says the differential diagnosis of symptomatic and idiopathic epilepsy is frequently one of great difficulty. Up to the age of 3-4 years, we should be chary of diagnosing idiopathic epilepsy until quite decided that no possible source of irritation, such as I have mentioned in a previous part of the paper, exists.

Statistics vary as to what percentage of children suffering from convulsions under 3 years of age actually have epilepsy in later life; 10-12 per cent. is usually given, but that number is derived from statements of adults, who in many instances are quite incompetent of knowing whether they had convulsions in infancy or not. In the last 50 cases of epilepsy Smith has seen in children under 12 years of age, 18 commenced in the first 3 years of life. In children after 5 years of age, the onset and repetition of attacks of major convulsions without any alteration in health, is practically always epilepsy. Confusion, however, arises in respect of *petit mal* at this age. Certain children, the subjects of chronic intestinal dyspepsia, and often of thread-worms in addition, are liable to transient attacks of fainting and sudden pallor. These symptoms are usually attributed to an upset of the vasomotor system, and are of little significance, yielding rapidly to rearrangement of diet and gastro-intestinal medication.

Either of the forms of epilepsy may be diurnal or nocturnal. In the latter case, the convulsions may for a long time escape observation. Evidence of nocturnal epilepsy may be obtained from the presence of enuresis, morning headaches, or bleeding from biting the lips and tongue. Certain cases of enuresis, unrelieved by belladonna alone, are cured by belladonna and bromide; a small proportion of these are possibly nocturnal epileptics. In two or three cases he has seen children suffering from severe morning headaches, in whom the cause was not apparent, till typical epileptiform convulsions appeared during the waking hours.—(*The Practitioner*, April, 1914.)

Heart Lesions Produced by Spirochete Pallida.

A. S. Warthin, of Ann Arbor, finds, as a result of the study of cardiac syphilis, the primary lesions produced by the spirochete pallida may be either parenchymatous or interstitial. The parenchymatous lesions are a peculiar pale degeneration, fatty degeneration, simple atrophy and necrosis; the interstitial lesions are the occurrence of a peculiar form of edema (myxedema), vascular and perivascular infiltration, and localized myxoma-like formations. The parenchymatous changes may occur absolutely independently of the interstitial, and the latter may be found with no associated changes in the neighboring heart muscle. The more marked the interstitial changes the more likely are parenchymatous changes to be associated with them, but the most marked parenchymatous lesions may occur without any interstitial changes. The purely parenchymatous lesions are found especially in virulent congenital and active secondary and early tertiary syphilis; in milder and older infections the interstitial changes, particularly the localized vascular and perivascular proliferations, predominate. The myxoma-like formations resembling undifferentiated gummas also occur in more localized and milder infections.

It is also of great importance to know that the heart is so frequently the seat of spirochete localization. The cardiac localization of spirochetes we have found to be more common than the hepatic. Spirochetes may be found in great numbers in the heart when no others can be found elsewhere in the body. In such cases the cardiac muscle may also show no lesions that, according to the older knowledge, would be classed as syphilitic, indeed, no organ or tissue may show any histological signs of syphilis even when the organisms are present in great numbers. That syphilis can produce purely parenchymatous lesions primarily in the myocardium opens up greatly the possibilties of this infection as a factor in the increasing myocardial affections of unknown origin. To what extent the spirochete pallida is the etiological agent in these conditions cannot be estimated with certainty at the present time, but my own experience would make me believe that syphilis, both congenital and acquired, is the most important etiological factor in the production of cardiac disease, both myocardial and endocardial.—(*Am. Jour. Med. Sci.*, May, 1914.)

High Blood Pressure.

Wilfred Edgecome discusses the question of the reliability of the manometer for giving a true reading of systolic or disatolic pressure, and how far it is influenced by the resistance offered by the arterial wall. He recognizes four types:—(1) The atheromatous of old people, in which, though the arteries are visibly tortuous, yet the extent of the calcareous thickening is

not uniform in extent, the right and left brachial giving different readings. In his own series, the maximum difference was 25 Hg. in males and 30 Hg. in the females. (2) The diffuse arterio-sclerotic, with uniformly thickened vessels in which the high reading is probably correct, but the author is inclined to doubt the correctness of the reading of 300 Hg. in cases in which incomplete obliteration gives so high a reading. (3) The hyperpietic, in which the pressure is moderately high, the vessels full and tense, but not firm or hard, and the heart as yet undamaged. In these cases, the rise is exaggerated through hypertonus of the vessel wall. (4) The neurotic or functional, generally seen in women, in which the physical signs in the heart and vessels are negative, and the rise in systolic pressure is due to temporary increase in cardiac activity. With these exceptions, the author regards the armlet instrument as a reliable and useful clinical guide.

The significance of high blood-pressure has been regarded in too serious a light, causing undue alarm in the patient. Edgecome's attitude towards the subjects of high blood-pressure has become more optimistic during the last five years, and more pessimistic as to the wisdom or utility of energetic treatment in a large proportion of them. Given a high pressure, the following questions arise:—(1) Is the pressure above physiological limit? (2) Is the high pressure temporary, or permanent? (3) If permanent, is it functional or organic? (4) If functional, does it require treatment? (5) If organic, how far is treatment advisable? With regard to the latter cases, he finds many of them continue in apparently good health even untreated, and he concludes, after the recital of two illustrative cases, by remarking, "They are typical of many, from whom I have learned that masterly inactivity is sometimes wiser than fussy interference."—(*Clin. Journal*, September 11, 1913.)

Jaundice in Tuberculosis.

J. M. Cruice, of Philadelphia, believes that Jaundice occurring in the course of chronic tuberculosis is probably due to some form of tuberculosis of the liver, either extrahepatic or intrahepatic. The grade of the jaundice is helpful in surmising the pathological condition, intense jaundice being probably due either to pressure of tuberculous glands on the extrahepatic ducts or to some form of the solitary tubercles of the liver; milder forms being produced by a miliary tuberculosis of the liver.—(*Am. Jour. Med. Sci.*, March, 1914.)

Acute Gastrectasis.

Reynold Webb Wilcox, of New York, urges an early diagnosis of this condition. He says the symptoms are notable: abdominal distension with pain, profuse vomiting with thirst, scanty urine and subnormal temperature, rapid breathing and speedy collapse. The startling suddenness of the onset attracts attention and the rapid increase in the severity of the symptoms is characteristic. The fact that, with all this enormous increase in size of the upper, and later lower, abdomen, there is no muscular rigidity, is not to be ignored. Furthermore, visible peristalsis is almost invariably absent and finally the early appearing collapse is accompanied with cyanosis. These three signs differentiate acute gastric dilatation from the various intestinal obstructions and from secondary peritonitis of different infectious origin. The picture once carefully observed is not readily forgotten.

The prognosis depends entirely upon the gravity of the conditions, doubtless a large number of patients with slight or even moderate dilatation recover without manifesting serious symptoms or even the condition being recognized. In surgical practice acute dilatation of high degree is of serious importance and it is upon those instances seen in consultation with surgeons that personal experience is based. More than one-half will result fatally unless prompt and vigorous treatment is instituted. In this group the prognosis immediately depends upon the character of the treatment. Of first and most importance is immediate thorough and frequently repeated washing of the viscus with the stomach tube, every hour or two for twenty-four hours if necessary, and in rare instances, every four hours for a period of days. If lavage is done more frequently than is necessary no particular harm results. Neither solid nor liquid substances should be given by the mouth. Thirst may be relieved by proctoclysis, hypodermoclysis or high enemata of normal saline solution. Rectal feeding, of any approved type, should be continued for several days after all symptoms and signs have disappeared.

Of less importance, but still never to be omitted, is the postural treatment; the head of the bed is raised and retained in that position when respiratory symptoms are pronounced, or lowered if the object is to relieve the constriction of the transverse (third) portion of the duodenum by the band of fibrous tissue which descends from the left crus of the diaphragm, or the patient is on his left side if vomiting be pronounced or the patient supine for the same reasons as would lead to the elevation of the foot of the bed. Obviously this position would be difficult or impossible after many abdominal operations.

Pharmacopeal remedies play but a minor rôle; calomel followed by a saline through the stomach tube if there is no contraindication, atropin, hypodermatically, may lessen the gastrosuccorrhea, relax pyloric spasm, and to this muscular tissue and aid respiration, and finally physostigmin, hypodermatically, to increase peristalsis when the dilatation also involves the duodenum, the mixed type, but the last must be used guardedly, on account of its depressive effect.—(*Arch. Diag.*, vol. vii, No. 1.)

Intravenous Injections of Radium in Polyarthritis.

Frederick Proescher of Pittsburgh believes radium offers marked aid in the treatment of this condition, based on experiments made in 16 cases. He believes the soluble radium salt is deposited as an insoluble sulphate in the diseased joints. After its use, reaction, in the form of pain and stiffness in the joints, was noticed in fifteen cases. In eight cases inflammatory swelling was observed which subsided in from two to twenty-two days after the injection. In three cases the patients claimed that they had slept unusually well, and in ten cases the marked general improvement was claimed by the patients between two and twenty-two days after the injection. No alarming symptoms were observed in any of the cases. The temperature and pulse did not show any considerable change. In a few cases the patients noticed an increase in the urine secretion.

In the following tables we compare the results of the radium emanation therapy as obtained by *Gudzent* in 247 cases of polyarthritis, with the intravenous radium therapy:

Radium Injection Therapy—		
Temporarily cured	4	25%
Considerably improved	8	50%
Improved	2	12.5%
No improvement	2	12.5%

Radium Emanation Therapy—

Considerably improved	62	25%
Improved	81	33%
Slight improvement	52	21%
No improvement	52	21%

It will be noted that the intravenous radium injection has a more marked therapeutic effect than radium emanation therapy. The most favorable cases for radium treatment are the acute and subacute and the not too far advanced cases of chronic polyarthritis. Very little or no effect was noted in the arthritis deformans except in one case which showed a fairly good improvement. As to whether intravenous radium therapy in acute cases with high fever is indicated, is an open question. In one acute case he gave 50 micrograms during a temperature of 102° without injurious effect. About 24 hours after the injection the pain in the joints entirely subsided.

According to Proescher's experience 100 to 200 micrograms of radium element should be a sufficient dose in the treatment of polyarthritis. It seems to be advisable to give radium in fractional doses, for instance 100 micrograms in four doses of 25 micrograms, or two doses of 50 micrograms each, given every other day or 200 micrograms in 50 microgram doses given every other day.

In cases of recurrence radium injection can be repeated without any fear of danger as to the accumulative effect of the radium.

Proescher gives this table showing therapeutical results obtained:

Temporarily Cured Case.—Acute polyarthritis, 18 days' duration; chronic progressive polyarthritis, four years' duration; subacute polyarthritis, three months' duration; chronic polyarthritis, two and one-half years' duration.

Considerably Improved Cases.—Chronic polyarthritis 1, four months' duration; chronic progressive polyarthritis 1, two months' to forty years' duration.

Improved Cases.—Chronic progressive polyarthritis 1, six months' duration; chronic progressive polyarthritis 1, one year's duration.

Unimproved Cases.—Oligoarthritis deformans 2, from four to nineteen years' duration.—(*Radium*, May, 1914.)

Lead Poisoning.

E. R. Hayhurst, of Chicago, examined 100 painters for signs of lead poisoning. Of these there were 49 married men of forty years of age or over, of whom 37 had living progeny.

There were 35 married men of forty-five years of age or over, of whom 26 had living progeny, whereas 7 had had none at all. In this group 2 had a total of 28 children with 16 living. The total progeny of the group was 116 children, or an average of 3.31 each; total living progeny was 75 children, or an average of 2.14 each; this includes the two large families, without whose statistics the respective averages would be 2.67 and 1.79 each. This is certainly very low for married men of at least forty-five years of age. Analysis showed that these same 35 men with their total of 116 living and dead progeny came from families having a total of 235 offsprings. While this group of forty-five-year-old painters may have more progeny, it is not likely they will double the same, as would be necessary to equal their own ancestral average.

Just what part lead poisoning and what part various social conditions may have had to do with this decreased progeny is impossible of ascertainment.—(*Am. Jour. Med. Sci.*, No. 6, 1914.)

Surgery

Cholelithiasis.

Moynihan does not believe in the medical fallacy that many cases of gall-stones exist without symptoms, but thinks that the vague term "indigestion" is used variously by patients to indicate all the several forms of distress which are the forerunners of a crisis of acute biliary colic. He calls attention to the fact that the "dyspepsia" and the final gall-stone attack are rarely correlated in the physician's mind, and he is insistent that a large majority of patients who have suffered for a long time from "gastric disorders" have really no organic disease of the stomach, but have a real structural change in the gall-bladder or the appendix. His phrase is almost epigrammatic, and is worth the quoting. "It is the stomach, whose sensibilities are tender, that cries out the warning when other organs are suffering attack."

The so-called inaugural symptoms are described by Moynihan as follows: "The patient complains of a fulness, weight, and distention, or oppression in the epigastrium coming on soon after meals, within half or three-quarters of an hour, relieved by belching, and dismissed almost on the instant by vomiting, elicited with remarkable constancy by certain articles of diet, especially those of a "greasy" nature, and dependent rather upon the quality rather than upon the quantity of food. There is a sensation of great tightness, which, if unrelieved, may become acute pain, from which the patient obtains ease by bending the body forward, by flexing the right thigh on the abdomen, or by loosening all garments which fit tightly to the waist. There is frequently great complaint of "acidity" or heart-burn, and in the act of belching there may be some acid regurgitation. While the discomfort lasts, the patient may notice a "catch" in his breath, and he finds, perhaps, that it is impossible to breathe deeply without feeling an acute stabbing pain at the right costal margin. There may be a faintness and nausea, and, rarely, vomiting may occur spontaneously. After a more than usually severe attack of "indigestion," the body and side may feel stiff for several days. A frequent and a very characteristic early symptom of cholelithiasis is the occurrence, during the attack of indigestion, of a slight sensation of chilliness, especially in the evenings after a meal. The patient may shiver for several minutes, and may hasten from the table to huddle over a fire. The sensation of "goose flesh" is often experienced, and several medical men upon whom I have operated have said that in the severe phase it was not unlike a very slight rigor, the chilly stage being quickly followed by one in which the body feels hot and the skin begins to act freely. "These symptoms may persist even for years before the attack of severe pain occurs. The cause of the biliary colic is impaction of the stone in the cystic duct."

As to treatment, Moynihan says emphaticallly: "There is, of course, no medical treatment of gall-stones," and again, "I hold that when once a diagnosis of gall-stones has been made, operation is always indicated unless there are grave reasons forbidding resort to surgery." (*Brit. Med. Jour.*, 1913, *p.* 8 *via Prog. Medicine.*)

Bone and Periosteal Transplantation.

During 1911 to 1913, W. L. and C. P. Brown carried out a series of experiments on dogs, to determine if possible the answer to the following questions:

1. Will periosteum produce bone, when transplanted into tissues, without bony contact?

2. Will periosteum produce bone, when left attached to bone and periosteum at proximal end, passed around fascicula of muscle, and again contacted with periosteum?

3. Will bone reproduce bone and continue to live, when deprived of periosteum and transplanted into the tissues without contact with living osteogenetic tissue?

4. Will bone live and reproduce bone, when transplanted into the tissues, not deprived of its periosteum, and not contacted with living osteogenetic tissue?

5. Will bone live and reproduce bone, when transplanted and contacted with living osteogenetic tissue?

6. Will bone reproduce bone without the aid of periosteum?

7. Is it essential that the transplant have a function in order to be permanent?

Based upon their experimental work to date, the authors draw the following conclusions:

1. They were unable, in any experiment, to reproduce bone from free periosteal transplants into the subcutaneous tissue and muscle.

2. They were unable to reproduce bone in any periosteal flap which was raised, left in contact with the bone, passed through muscle, and again contacted with periosteum, with the one single exception where there was a small nodule of bone formed apparently in the free end of the flap, corresponding to another nodule on the shaft of the bone opposite, leading them to the belief that because no bone had formed anywhere else in the flap, the bone in the tip of the free periosteal flap was due to osteoblasts raised from the corresponding area on the shaft of the bone.

3. They were unable to reproduce bone in any experiment from free bone transplants, without periosteum, into the subcutaneous tissue and muscle, regardless of the age of the transplant. Absorption was the rule in every case.

4. They were unable to produce bone in a single experiment where bone was transplanted free, periosteum being left intact into the muscle or subcutaneous tissue. These transplants were uniformly absorbed.

5. They were uniformly able to reproduce bone, when transplanted and contacted with living bone, if it were in position where it had a function to perform.

6. Other necessary conditions being present for its reproduction, bone reproduces bone without the aid of periosteum.

7. The transplants that were contacted with living bone and had no function to perform were inclined to absorption.

8. While periosteum may be an aid to the life and growth of bone, the authors were not able to prove, in any experiment, that it was at all essential.—(*Surg., Gyn. & Obst.*, No. xvii, 1913.)

Inguinal Hernia in the Child.

H. S. Clogg thinks inguinal hernia in the child is always dependent upon a development error, the sac of the hernia being the processus vaginalis, in whole or part. The hernia descends the whole length of the canal, and is, therefore, of the oblique or indirect variety. The failure of this processus vaginalis to undergo normal development accounts for all inguinal hernias in childhood. He believes that weakness of the abdominal muscles, and some increased intra-abdominal pressure have very little to do with inguinal hernia in children.

In the male, two types of hernia are recognized: (1) The sac is the complete processus vaginalis—the complete sac—and extends to the bottom of the scrotum, having the testicle project into it posteriorly. (2) The lower part of the processus vaginalis has become separated—the upper part only remaining in communication with the peritoneum—the incomplete sac. The size of the incomplete sac will vary considerably, depending on the site at which it has been naturally obliterated.

The diagnosis is considered from two standpoints: (1) The history of a swelling which has been seen and has disappeared, and cannot be seen when the child is brought for examination; and (2) a swelling which is present. In regard to the former, glands appearing suddenly, hydroceles, excessive pubic fat and a movable testicle must be differentiated. In regard to the latter it is easy to determine that the swelling comes from the abdomen by being unable to detect the cord free from the swelling.

Clogg considers the treatment under two headings: Truss and operative. The only value in the truss is in restraining the descent of the hernia, thus allowing nature to proceed with normal development. A truss may act indirectly in the cure of a hernia. During the first few months the author advises a truss solely with the object of restraining the hernia. This treatment he continues to about the fourth or sixth month; if a child is under observation after the fourth or sixth month of life, and is healthy, operation is advised. In special circumstances, e. g. a large hernia which cannot be controlled by a truss, or a hernia which is frequently coming down and causing difficulty in reduction operation will have to be undertaken at an earlier age.

The cæcum is frequently herniated in children, and must be treated carefully. Appendicitis in the hernial sac occurs in children—about 25 per cent. of the cases reported being found in children. Rarely the pelvic colon escapes through the ring on the left side, although the bladder also may occupy the hernial sac. The treatment consists in carefully separating the portion of the bladder, and allowing it to return into the abdomen. The ovary and tube are frequent contents of the hernial sac in the child. The treatment consists in carefully separating the organs and replacing them.—(*Clin. Jour.*, No. 42, 1913.)

Ambulatory Treatment of Varicose Veins and Ulcers of the Leg.

Von Heuss tested the treatment of varicose veins, dermatoses, and ulcerations of the leg with adhesive bandages on 350 cases for a number of years and recommends it very warmly. The effect of the bandage is due to continuous methodical pressure and also to the therapeutic action of the adhesive material. The bandage material is elastic; the adhesive matter does not irritate the skin, even when it is left on for long periods of time. If there is much secretion from the surface of the ulcers, the bandage can be left in position; it does not even need to be taken off for warm baths, etc., and is therefore very economical. The active medicinal component of the adhesive material is a combination of lead in the form of litharge. As a result of the treatment, œdema and varices disappear, dermatoses heal, all sorts of ulcers even indolent ulcers

with indurated edges, are covered over with skin more or less quickly. The treatment is ambulatory; the patients can be out of bed, and with care can go about their work. The results depend on a careful carrying out of the directions given in the article.—(*Münch. med. Woch.*, Dec. 14, 1913.)

Visceral Pleurectomy.

C. H. Mayo and E. H. Beckman observe that up to the time of Fowler and DeLorme, various operations for the relief of chronic empyema with a large cavity had been tried in order to obliterate the cavity by collapsing the chest wall and without making any attempt to restore the function of the collapsed lung. The operations of Fowler and DeLorme have been accepted quite generally in Europe, but have not received much attention from American surgeons. A systematic review of the literature discloses but 24 cases reported by American surgeons in the last twenty years.

It is believed that in a considerable percentage of cases of chronic empyema, the lung will expand to a greater or less extent if visceral pleurectomy combined with gridironing of Ransohoff, is performed. In the experience of the authors, the operation is not as severe or as dangerous as the Schede operation. Patients should be carefully prepared for operation by securing drainage at the most dependent part of the cavity, by reducing the infection to a minimum and the resistance of the patient to the maximum by vaccines. The operations for this condition cannot be made by rule, but must be selected individually for each case; they are often best done in stages, especially when the patient is in a debilitated condition. It is advisable to try visceral pleurectomy first, as some lung expansion is nearly always obtained. If the cavity still persists, the operations of Estlander and Schede or one of the modifications of these operations can be done at a later time to obliterate the cavity remaining. Four cases of visceral pleurectomy are reported, three of which healed primarily, and in the other, two-thirds of an entirely collapsed lung is functionating.—(*Tr. Am. Surg. Ass.*, N. Y., April, 1914.—By *Surg., Gynec. & Obst.*)

Pericarditis.

R. L. Wilbur, San Francisco, discusses the therapeutics of pericarditis, calling attention to the accessibility of the pericardium for local and surgical treatment and the possibilities that the future may have. Induced pericarditis in animals offers a good field for study in this direction. The early diagnosis of dry or serofibrinous pericarditis permits the most effective treatment and must be based largely on (a) vague feelings of pain in the chest or actual pain; (b) cardiac irritability, and (c) friction rub. Early aspiration, preferably at the left of the nipple line, is of value in the diagnosis of effusion, and tapping should be practiced when the heart's action is disturbed from apparent increase of intrapericardial pressure. He recommends the Brauer method being more often used where there are evidences of pericardial adhesions and early signs of heart hypertrophy or dilatation. It will, he thinks, diminish disability and prolong life. The pain of pericarditis (acute or chronic) should be carefully differentiated from true angina pectoris. Careful and repeated examinations for friction rub should be made over the whole cardiac area in patients with precardial vein.—(*J. A. M. A.*, July 25.)

The Physician's Library

Practical Therapeutics. By Hobart Amory Hare, M. D., Professor of Therapeutics in Jefferson Medical College, etc. 15th Edition. Illustrated. Cloth. 1,000 pages. $6.00 net. Philadelphia and New York. Lea & Febiger, 1914.

For nearly 25 years this book has been the leading work of its kind in the English language. The fact that it has gone through 15 editions in that time is proof positive of the hold it has had on the profession. Hare has been able to show the practitioner "what drugs do good and how they do good," as well as "how and when to use them so they will do good." These ideas have been carried out to the letter, so that thousands of medical men freely consult this work for their enlightenment on lines of treatment, as well as therapy.

The book has grown with the years and the advance in therapeutics. The fourth edition, published in 1894, contained 260 pages less than the present edition and it was without illustrations. There are 151 plates in the new book. Progress has marked the growth of this book or series of books, as it does all of Hare's works. He has given medicine lasting tributes of knowledge and has placed his colleagues forever in his debt.

We wonder how one can practice medicine without a copy of this book at one's elbow.

Practical Pediatrics. By James H. McKee, M. D., Professor of Pediatrics in Temple University. Philadelphia, and William H. Wells, M. D., Assistant Professor of Obstetrics in Jefferson Medical College. With a Supplement upon Development and Its Anomalies. By J. Madison Taylor, A. M., M. D., Associate Professor of Non-Pharmaceutic Therapeutics, in Temple University. 2 colored plates and 146 illustrations, including 238 figures. Octavo. 2 Vols. Cloth $12.00. Philadelphia: P. Blakiston's Son & Co., 1914.

This is a practical work on a most important subject. In addition to the usual elements of such a book, as etiology, diagnosis, prognosis and treatment, the authors have entered a new field. They are attached to the staffs of some New Jersey schools for deficient children and are thus able to present much original eugenical maare thus able to present much original eugeunical material. They have given much thought and study to the abnormal child, which is well reflected in these volumes. To say they have covered the field of pediatrics well is yielding them too little praise. Every phase of children's diseases has been presented elaborately and the faithful portraiture gives the reader a comprehensive knowledge of the subject. In addition to the work of the authors, several specialists have contributed to the chapters on diseases of the nose, throat, ear, skin, heart and surgical diseases.

Diseases of the Rectum and Colon. By Jerome M. Lynch, M. D., Professor of Rectal and Intestinal Surgery in the New York Polyclinic. Cloth, 583 pages, with 228 engravings and 9 colored plates. $5 net. Philadelphia and New York: Lea & Febiger, 1914.

The author presents this volume for the benefit of general surgeons, "who have not yet attained well rounded experience in rectal and colonic surgery" and he has consequently covered the entire field with minute detail. He has neglected no small matter, which, if omitted, may mar the success of the operation. For the purpose intended the book is excellent. Technique

(*Continued on Page* 20.)

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(*Continued from p. 360.*)

is well presented and preparation of the patient and after treatment are covered with exactness.

Much value is added by the splendid typographical appearance. The publishers have the faculty of combining real art with book making and as a result all of their books have a high standard of their own. Lynch has been fortunate in being given a beautiful vehicle for his ideas.

Modern Medicine. By American and Foreign Authors. Edited by Sir William Osler, Bart, Regius Professor of Medicine of Oxford University; and Thomas McCrae, M. D., Professor of Medicine in the Jefferson Medical College, Philadelphia. In five vols. of about 1,000 pages each, illustrated. Vol. III. Diseases of the Digestive System—Diseases of the Urinary System. Cloth, $5.00 net; half morocco, $7.00 net. Philadelphia and New York: Lea & Febiger, 1914.

This volume will appeal especially to the general practitioner, on account of the valuable information on the diseases of the digestive system it contains. Every part of the digestive tract, from mouth to intestines, is thoroughly covered and the diseases are treated exhaustively. If we were to mention especially any sections, we should refer to Stengel's disease of the intestines and Kelly's diseases of the liver, gall bladder and ducts.

The kidneys are discussed with great completeness in Part II. Hugh Young, McCrae of Montreal and Garrod of London, present very enlightening contributions on the kidney and its pathological conditions.

The volume is quite in keeping with the high standard set by the authors and adds to the laurels already gained by them through the excellence of the two previous volumes.

Ten Sex Talks to Boys 10 Years and Older. By I. D. Steinhardt, M. D. Cloth, 187 pages. $1.00 net. Philadelphia: J. B. Lippincott Co., 1914.

This book, if read by all boys, would be such good moral insurance that troubles arising from youthful indiscretions would be cut down 75 per cent. We cannot put morality in an unmoral or immoral boy, but the average youngster is innately good and only needs the proper training to keep him in the straight way.

These talks point out the path so clearly and definitely that no right-minded boy would think of sowing his crop of wild oats. The book shows too plainly what the harvest is.

International Clinics. A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles. Edited by Henry W. Cattell, A. M., M. D. Volume II, Twenty-fourth Series. Philadelphia: the J. B. Lippincott Company, 1914.

This volume is quite as interesting as its predecessors. It covers the field of medicine and its various specialties, diagnosis, treatment, surgery, obstetrics and child welfare. An article by Philips on the application of the obstetric forceps is of much clinical value and all the articles are of interest.

Materia Medica for Nurses. By A. S. Blumgarten, M. D., of the German Hospital, New York. Cloth. 644 pages. $2.50 net. New York: The Macmillan Company, 1914.

Any nurse who will absorb the excellently presented therapeutic facts in this book will prove a source of great assistance to patient and physician. The matter is splendidly arranged and salient facts alone, with no verbiage, are given. The chapter on solutions is most helpful and the general arrangement permits thorough and logical study of the drugs in the various classifications. In this day of therapeutic nihilism we would recommend this book to the physician to review the work of his college days. It would enthuse him in the sane and sensible art of drug prescribing.

Radium and Radiotherapy. By William S. Newcomet, M. D., Professor of Roentgenology and Radiology in Temple University. Cloth. 315 pages, with 71 illustrations and 1 plate. $2.25 net. Philadelphia and New York: Lea & Febiger, 1914.

Radium has been abused. Quacks and charlatans have waxed fat from so-called radium cures. The element has almost gotten into ill repute in consequence. This book will go far toward putting it in its true light before the medical profession.

It discusses the chemistry and physics of radium and its applications in the practice of medicine. It will be worth the while of the practitioner to inform himself, through these pages, of the real value of this much discussed element.

Military Hygiene and Sanitation. By Lieut.-Col. Frank R. Keefer,, Medical Corps, U. S. Army; Professor of Military Hygiene, U. S. Military Academy, West Point. Cloth. 305 pages, illustrated. $1.50 net. Philadelphia and London: W. B. Saunders Company, 1914.

This little book, elaborated from the author's lectures at West Point, is a clear and concise exposition of hygiene and sanitation from the standpoint of the army medical officer. It discusses the clothing and equipment of troops and their food, as well as hygiene and sanitation of camp, post, march and battlefield. Preventable diseases are well handled. The section on typhoid fever is especially enlightening. For comparison Keefer takes an army division in Florida in 1898 and one in Texas in 1911. In the former there were 2,693 cases of typhoid with 248 deaths. In the latter were two cases and no deaths. This exemplifies the value of antityphoid vaccination.

The book is an interesting and instructive epitome of a subject which is becoming of greater public interest every year.

A Clinical Medicine. By William Hanna Thomson, M. D., LL. D., formerly Professor of Practice of Medicine in New York University. Cloth, $5. Half Morocco, $6.50. 667 pages. Philadelphia and London: W. B. Saunders Company, 1914.

The author has always been noted for his independence of medical belief, as his students and colleagues can testify. Never, however, has this fact been made more evident than in this book, which entirely abandons the beaten track. The book is interesting on that account, although its value as a text book is likely to be lessened by that very fact. The arrangement is odd. For instance, drug habits and mineral poisons make up (2) chapters in the section on diseases of special tissues and organs. Again he places tabes and paresis under the heading of chronic infections, directly communicable or contagious, a classification which will surely be challenged. The book contains a great deal of valuable clinical information and to the experienced practitioner it will prove of assistance. It is written in the succinct style of the author and it will be eagerly read.

It is well to start cases of erythema multiforme on divided doses of calomel.

THE NURSING MOTHER

is often unable to meet the additional tax imposed on her bodily nutrition, and, as a consequence, soon begins to "run down." At such a time there is urgent need, not only to supply increased nourishment, but also to aid the digestion and promote the assimilation.

In most cases, moreover, when digestive troubles arise during lactation, the digestion of carbohydrates or starchy foods is especially impaired. To relieve and correct this condition it is always necessary to give carbohydrates in readily assimilable form together with appropriate quantities of active diastase. It will be at once apparent that malt extract meets these qualifications as can no other nutrient, and experience has well demonstrated the value of

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BOOKS RECEIVED.

All books received will be acknowledged in this column, and those which warrant further notice will be given a more extended review in a later issue.

Diseases of the Nose, Throat and Ear—Medical and Surgical—by William L. Ballenger, M.D., Professor of Otology, Rhinology and Laryngology in the University of Illinois. Fourth Edition, revised and enlarged; illustrated with 536 engravings and 33 plates. Cloth, 1,080 pages. Published in 1914 by Lea & Febiger, Philadelphia and New York.

A Text-Book of Pathology for Students of Medicine. By J. George Adami, M. A., M. D., F. R. S., Strathcona Professor of Pathology, McGill University, and John McCrae, M. D., M. R. C. P. (Lond.), Lecturer in Pathology and Clinical Medicine, McGill University, Montreal. Second Edition, revised and enlarged; illustrated with 395 engravings and 13 colored plates. Cloth, 878 pages. Published in 1914 by Lea & Febiger, Philadelphia and New York.

Dietetics or Food in Health and Disease. By William Tibbles, L. R. C. P., Edin.; M. R. C. S., Eng. Author of "Food and Hygiene," "Foods; Their Origin, Manufacture and Composition," "Diet in Dyspepsia," "The Theory of Ions," etc. Cloth, 627 pages. Published in 1914 by Lea & Febiger, Philadelphia and New York.

Blood Pressure, Its Clinical Applications. By George W. Norris, A. B., M. D., Assistant Professor of Medicine in the University of Pennsylvania. Illustrated with 98 engravings and 1 colored plate. Cloth, 375 pages. Published in 1914 by Lea & Febiger, Philadelphia and New York.

Diseases of the Nose and Throat. By Cornelius G. Coakley, A. M., M. D., Professor of Laryngology in Columbia University. Fifth Edition, revised and enlarged. Illustrated. 615 pages, with 139 engravings and 7 colored plates. Published in 1914 by Lea & Febiger, New York and Philadelphia.

Les Characteres Medicaux dans L'Ecriture Chinoise. By Lucien-Graux, M. D., Member of the Society of Medicine of Paris, etc. Illustrated; 276 pages. Price, 4 francs. Published in 1914 by A. Maloine, Paris.

Diseases of the Skin Including the Active Eruptive Fevers. By Frank Crozier Knowles, M. D., Instructor of Dermatology, University of Pennsylvania. 199 illustrations and 14 plates. Cloth, 546 pages. Published in 1914 by Lea & Febiger, Philadelphia and New York.

Local Anesthesia. By Prof. Dr. Heinrich Braun, of Zwickau, Germany. Translated and edited by Percy Shields, M. D., F. A. C. S., Cincinnati, O. From the Third Revised German Edition with 215 illustrations in black and colors. 399 pages, cloth. Published by Lea & Febiger, Philadelphia and New York, 1914.

Medical Diagnosis. By James M. Anders, M. D., Professor of the Theory and Practice of Medicine and of Clinical Medicine, and L. Napoleon Boston, M. D., Professor of Physical Diagnosis, Medico-Chirurgical College, Philadelphia. Second Edition, thoroughly revised. Octavo of 1,248 pages, 500 illustrations, some in colors. Cloth, $6.00 net; Half Morocco, $7.50 net. Published in 1914 by W. B. Saunders Company, Philadelphia and London.

Syphilis does not cause itching. Eczema does.

Well Fed Babies

are always happy and contented; those whose food does not agree with them are invariably fretful and cross.

When a little one cries more or less all the time, it is plainly evident that its digestion is deranged and its food is not agreeing with it. Its diet needs changing at once; if breast fed, weaning should not be delayed.

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simplifies these problems to a marked degree, and allows the physician, not only to place each infant's diet on a scientific basis, but to adjust its daily nourishment to its digestive capacity and nutritional needs with remarkable precision.

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Babies fed on Nestlé's Food sleep much, cry little, and have the happy, healthy appearance that shows that they are well fed and properly nourished.

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Surgery of the Seminal Vesicles.

Based on personal experience with reports of other cases, J. B. Squier, of Cleveland, says that from the focal point of infection in the vesicle there may take place a periodical absorption of infective material, either neisserian with streptococcus or staphylococcus, or both, with the subsequent development of single or multiple arthritis, either in the form of chronic ostearthritis of hypertrophical or atrophical type. He believes that chronicity of vesicular infection is due to the fact that the natural channels for drainage are incompetent. His operation is somewhat different from the Fuller method. He does an inverted Y-incision, and after dissecting down to the prostate he introduces two stout silk-sutures at the junction of the prostate and bladder base, placed as far laterally as possible. Traction on these sutures rotates the prostate and bladder upward and forward, thus allowing incision and drainage with multiple puncture of their numerous diverticula, or excision of the vesicles under control of the eye.

Indications for drainage of the seminal vesicles, according to the author, may be summed up in three words: pus, pain and rheumatism.

Under the first heading are:

1. Those acute cases developing in the course of a gonorrhœa in which the perivesiculitis present simulates prostatic enlargement.

2. Cases of recurrent epididymitis following acute urethritis and vesiculitis.

3. Certain cases of chronic vesiculitis where there is a defecation spermatorrhœa and which have resisted faithfully carried out non-operative treatment.

Under the heading of pain come those patients complaining of persistent perineal ache, with severe urethritis, presupposing that other possible causes for the condition have been eliminated.

The rheumatic group includes those cases in which a definite relationship may be established between an antecedent gonorrhœa with vesicular infection and the joint lesion.—(*Cleve. M. J.*, Dec. 1913.)

Hypothyrosis and the Urinary Tract.

Heinrich Stern believes there is a connection between certain urinary symptoms with localized structural changes of a hypothyroid character and recommends that in cases of frequent or painful micturition a general hypothyrotic state with manifestations in the lower urinary tract must be thought of, and that a cystoscopic examination of the latter be made;

That, possibly, frequent or painful micturition may be an early, and as such for a time the only subjective phenomenon of import in hypothyrosis, and that a cystoscopic examination be undertaken.

He believes that enuresis in children as well as in adults may be due to hypothyrotic or kindred origin, that the cures of such cases after the administration of thyroid substance, as reported by French and other physicians, may be due to the disappearance of myxedematous swellings from the lower urinary tract, and that in instances or persistent bedwetting a cystoscopic investigation be insisted upon.—(*Archives of Diagnosis*, Oct., 1913.)

An Invitation To Physicians

The Charles B. Towns Hospital, for the Treatment of Drug Addiction, Alcoholism and Nervous Diseases, 293 Central Park West, at 89th Street, New York City, extends an invitation to all physicians to visit its new quarters, recently purchased, and familiarize themselves with the method and treatment. The Towns Hospital has been established 14 years. It is operated under conditions which render the alienation of the patient from his physician impossible. There is nothing secret; physicians are kept informed from the first to the final dose of medication and a complete bedside history of the case is fully charted. Physicians are not only welcome during the treatment but are invited to follow every detail of its administration. The Towns Hospital is everything its name implies—a hospital in the strictest sense, under the direction of physicians and trained nurses experienced in the work. The active treatment requires only a few days and its brevity is a distinct advantage to out-of-town physicians who may desire to accompany their patients to the city. Rooms may be had en suite for those wishing such accommodation and special provision is made for patients of moderate means.

The treatment in detail has been fully explained in articles appearing in the Journal of the American Medical Association, and reprints, together with a booklet and articles which have appeared in other publications, containing full information relative to the treatment, terms, etc., will be mailed on request.

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The most eminent physiological scientists of both the United States and Germany, after lengthy investigations, have proven that Benzoate of Soda is a harmless preservative substance.

As no fruit or vegetable preserves itself, a condiment like Tomato Ketchup, which is consumed in small quantities, and the unused portion thereof allowed to be exposed to the air for a time after opening, will ferment and spoil unless some preservative is used.

Every Ketchup contains *some* preservative, notwithstanding claims to the contrary:

The two methods of preservation are by the use of Acetic Acid or Benzoate of Soda, and it is a matter of choice with manufacturers which of these preservatives their products should contain.

In the former, the tomatoes are cooked to a heavy consistency, loaded with Acetic Acid—masked by a large sugar content—and spices, producing an "acid-sugar-spice" flavor. While the fermentation is thus retarded, the natural tomato flavor—the essential of a good Tomato Ketchup—is entirely destroyed.

In the other method, which we advocate and use, a small quantity (1/10th of 1%) Benzoate of Soda is admixed with the lightly cooked and delicately seasoned product. Benzoate of Soda, being a tasteless, odorless, colorless preservative substance, cannot alter or change the taste, flavor or color of any product with which it is admixed. Its use is recognized and endorsed by both the United States and German governments.

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Keeps after opening.

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Frank Hinman, of Baltimore, finds that the conversion of hexamethylenamin into formaldehyd is a simple chemical process which will readily occur in an acid medium but will not occur in an alkaline medium. The amount of excretion of hexamethylenamin in the urine is influenced by the size of the dose, by the frequency of administration and by the character of the changes that occur in the acid contents of the stomach. The amount of the subsequent conversion of this hexametylenamin in the urine is dependent on the degree of urinary acidity, on the duration of exposure to the influence of this acidity and on the percentage concentration of the drug in it; and in order to give formaldehyd conversion in antiseptic amounts the urinary acidity should be greater than 2 cc. of tenth-normal sodium hydroxid for 10 cc. of urine. A low acidity may be temporarily increased by feeding certain acid-producing drugs, and this increase in acidity may often be maintained by giving these drugs alternately. Disease of the kidney has no influence whatsoever on the formaldehyd content of the urine. At the level of the kidneys hexamethylenamin in doses of 15 grains three times a day has no antiseptic value. Formaldehyd is present in the bladder urine in some amount in practically every case receiving 15 grains of hexamethylenamin by mouth three times a day, but this dosage is too small a routine from which to expect a reasonable antiseptic benefit in every case. The allied hexamethylenamin compounds do not give greater antiseptic values than pure hexamethylenamin.—(*Journal A. M. A.*, Nov. 1, 1913.)

A Phylacogen for Typhoid Fever.

An announcement that will undoubtedly occasion widespread interest among physicians is appearing in current medical journals over the signature of Parke, Davis & Co. We refer to the announcement of Typhoid Phylacogen. The new product is prepared from pure cultures of the bacillus typhosus of Eberth and Mixed Infection Phylacogen. As the name signifies, this latest Phylacogen is indicated in the treatment of typhoid fever or any pathological condition due to infection with the bacillus typhosus. Before being formally offered to the medical profession, Typhoid Phylacogen was subjected to rigid clinical tests extending over two years. The most significant fact developed by these investigations appears to have been the prompt amelioration of symptoms and rapidity of recovery in successful cases. Indeed, it is evident that, when properly treated, recovery not uncommonly takes place in approximately half the time required under conventional methods.

Parke, Davis & Co. have issued a 32-page brochure on Typhoid Phylacogen which deals in extenso with the new method of treatment, discusses diagnosis, dosage, technique of administration, etc., and reproduces a valuable paper by Dr. E. P. Benoit, professor of clinical medicine in the Laval University and physician at Notre Dame Hospital, Montreal, read before the Medical Society of Montreal and later published in *"L'Union Medicale du Canada."* Dr. Benoit refers at some length to a number of typhoid cases that were treated at the Notre Dame Hospital, concluding his paper with the significant observation that "the treatment of typhoid fever with Phylacogen gives real results." Physicians are advised to send for a copy of this "Typhoid Phylacogen" pamphlet.

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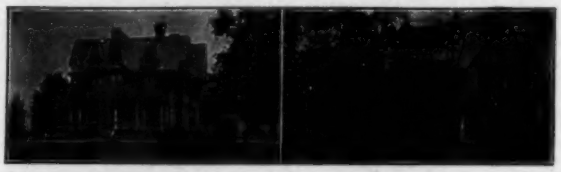

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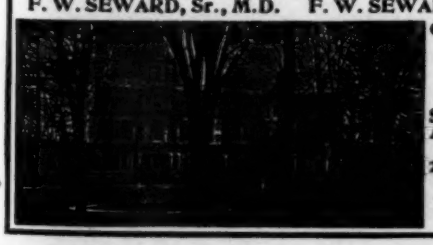

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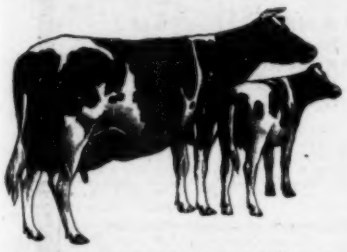

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Simple Ulcer of the Bladder.

In commenting upon two cases which recently came under observation, Leo Buerger, of New York, expresses the opinion (*Am. Jour. Urol.* No. 3, 1913), that ulcers on the posterior wall of the bladder may easily escape detection, as both of his patients had been previously cystoscoped and the lesions had not been found. This circumstance perhaps well illustrates Casper's statement that skillful cystoscopy will always remain the trick of the few. As to treatment, Buerger recommends fulguration, mercurial injections, and excision of the ulcer-bearing area, according to the circumstances obtaining in the individual case.

A case reported by H. Le Fevre, of Bordeaux (*Jour. d'Urol,* No. 2, 1913), is interesting, particularly as the ulcer perforated into the peritoneal cavity just as an ulcer of the stomach or duodenum often does. The case was that of a woman, aged fifty-eight years, who entered the hospital for a large strangulated femoral hernia. At the operation it was necessary to resect a large portion of the omentum. Convalescence was normal, and the wound healed by first intention. Twenty-three days after the operation the patient felt a sharp, sudden pain in the abdomen just as she was about to void urine and was unable to pass a single drop. For an hour she had a pressing desire to empty her bladder, but was unable to do so. The tenesmus then subsided. It was five hours after the beginning of the attack that Le Fevre first saw the patient. Her pulse was 100, her temperature 37° C., and she complained of abdominal pain, which was most severe in the suprapublic region. It was thought that the trouble might be due to inflammation of the resected omentum or to the formation of a late abscess accompanied by retention of urine. Ice was applied to the abdomen, and the catheter passed into the bladder. One thousand grams of clear urine were evacuated. No urine was passed spontaneously, but in the evening, five hundred more grams were removed with the catheter. The next day the abdominal pain had become much less severe, although the facial expression of the patient was very bad. Her eyes were sunken, she was pale, the tongue was dry and red, the pulse small and beating at the rate of 120 times a minute; the temperature was 36.6 Centigrade and a considerable degree of dyspnea was present. The abdomen was more distended than it had been the preceding day. Six hundred grams of clear urine were drawn with the catheter. The patient's condition became progressively worse, and she died in coma late in the evening. Autopsy revealed a perforation of the bladder into the peritoneal cavity. The perforation was on the posterior wall near the summit and close to the median line of the abdomen. The author believes that the ulcer was due either to a thrombus or to an infection dating from the strangulation of the femoral hernia.

Legueu (*Progress Med.* No. 19, 1913), has also had a case in which perforation occurred with fatal result. He now advises resection instead of cauterization.—(*Progressive Medicine,* Dec., 1913.)

Dislocation of Proximal Phalanx of Great Toe.

Skillern reports (*J. A. M. A.*) a case of dislocation of proximal phalanx of great toe. The dislocation was reduced by the method proposed by Dr. Crosby for reducing dislocations of the thumb. This type of injury is rare.

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Uterine Bleeding.

The more important points of an instructive article on uterine bleeding by E. Novak, Baltimore, in which he reviews the relations of the ductless glands and the nervous system to uterine hemorrhage, are given by him as follows: "1. The proper basis for the study of uterine bleeding is the study of normal menstruation, along physiologic as well as anatomic lines. 2. The factors concerned in normal menstruation are (a) an ultimate cause, residing in the ductless gland chain; (b) a nervous mechanism, essentially vasomotor in character; (c) the uterus, and especially the endometrium. 3. The causes of uterine bleeding may therefore be grouped as (a) fundamental, involving disturbances of the internal secretions; (b) nervous, exerting their effect mainly through the vasomotor nerves; (c) anatomic, in which structural changes are present in the uterus or other pelvic organs. 4. Most frequently the exciting cause of uterine hemorrhage is anatomic, the lesion being in the uterus, tubes, ovaries, blood-vessels or even the blood itself. 5. In a not inconsiderable number of instances, bleeding is due to fundamental or nervous causes, especially at the two extremes of menstrual life, puberty and the menopause. 6. There is good reason to believe that much light will be thrown on the rôle of the fundamental causes, and perhaps even of the nervous causes, by clinical methods of study which are based on the relation known to exist between the ductless gland apparatus and the vegetative nerve system."—(*J. A. M. A.*, Aug. 22.)

Travel Study Club.

The Travel Study Club of American Physicians, which made a successful study tour of Europe last year, has completed the plans for its 1915 study tour to San Francisco, Honolulu, Japan, the Philippines, China, with optional return via Siberia and Europe, war permitting, or via Canada. This being the first party of American physicians ever visiting the Far East and the new possessions of the United States, a most cordial welcome can be expected by authorities and members of the medical profession. The Travel Study Club would like to make its enterprise as representative as possible and asks all those interested to communicate with the Secretary, Dr. Richard Kovacs, 236 East 69th Street, New York.

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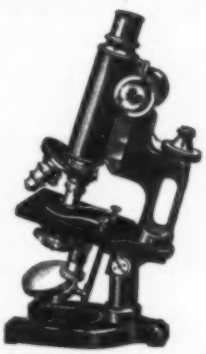

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The Prevention of Gynecological Diseases of Obstetrical Origin, With Special Reference to Those Originating in the Puerperium.

Walter Clinton Jones, of Chicago, emphasizes soap and water as the most important artificial means for the prevention of infection. The cleansing of the mother should not be too vigorous but should be prolonged. Antiseptics are of secondary importance. The number of vaginal examinations should be reduced to a minimum, and short normal labors should be conducted without any digital exploration. Cervical lacerations should be repaired at once, if one has proper facilities. Otherwise it is better to wait several days or, if necessary, even longer. Cervical tears may be prevented to some extent by not hastening unduly the first stage of labor and by avoiding rupture of the membranes until dilatation is surely completed. Most perineal lacerations can be prevented by episiotomy when other means fail. After they have occurred, immediate repair is the best treatment, indefinite delay being entirely inexcusable. Uterine retropositions usually can be prevented by postural treatment, especially by employment of the knee-chest position. If this fails, tampons or pessaries may be used. Subinvolution may be avoided by stimulating uterine tonicity, by maintaining the normal anterior position of the uterus, by removing retained secundines, by repairing cervical lacerations and by keeping up the woman's general strength. Avoid hyperinvolution by not overdoing the measures which favor involution. The average period in bed for a puerperal woman is about ten days. Confinement for three or four weeks is entirely unjustifiable. During the last few years there has been a decided tendency to lessen the stay in bed so that now many of our best obstetricians have shortened it to seven or five or even two days or less in normal cases. Prolonged rest in bed produces muscular atrophy and gives rise to the danger of fatal embolism. These ill results may be avoided to a large extent by active exercises and massage.—(*International Journal of Surgery*, Oct., 1913.)

A Safe and Reliable Analgesic.

It is difficult to find an efficient remedy for the relief of pain which at the same time produces no narcotic effects with their distressing and oftentimes disastrous sequelae. For this reason the opiates, effective as they may be in soothing pain, are usually contraindicated. A habit may be induced which in many instances it is impossible to break. Phenalgin however controls pain with remarkable efficacy and because of its composition is free from all danger of causing a drug habit. Since it possesses the therapeutic remedies of the narcotising agents without their drawbacks it has a wide field of use. Phenalgin is especially indicated for the relief of dysmenorrhea, from which so many women, from the sedentary nature of their employment suffer nowadays. When these periodical pains recur, the victim is apt to fly to a narcotic to gain a respite, and the consequence too often is that a drug habit is formed. Through the use of phenalgin, however, the practitioner can promptly control painful menstruation with gratifying avoidance of all tendencies to drug habituation.

Hysterotomy is indicated in every case of placenta previa where the hemorrhage cannot be controlled.